Understanding Canada's Health Care Costs

FINAL REPORT

Provincial and Territorial
Ministers of Health

August 2000

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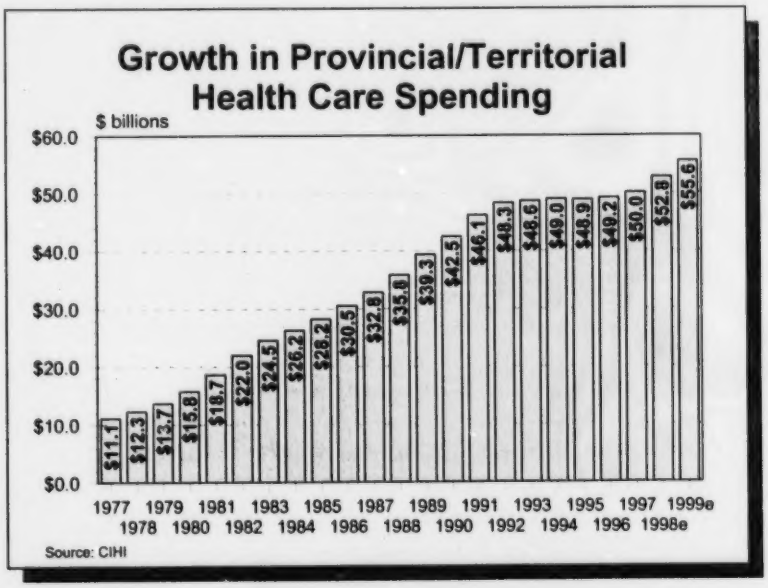
Executive Summary

Canadians are concerned about the future of Canada's health care system and have consistently identified health care as their top priority. As key in the process of stabilizing and sustaining the health care system, Provincial and Territorial Premiers are unanimous in calling on the federal government to immediately and fully restore funding cut from the Canada Health and Social Transfer (CHST), and implement an appropriate escalator to ensure that funding for health and other social programs through the CHST keeps pace with the economic trends, social factors, and changing health technology, which impact on the sustainability of the system.

This report examines how the health care system is financed, provides an analysis of innovations that are already underway in provinces/territories and looks at the current and future cost drivers and accelerators in Canada's health system. The analysis shows how provinces/territories are already significantly involved in activities that are improving the quality of health care services provided to Canadians. It also illustrates the source and size of health care cost drivers, as well as the significant additional costs associated with health system renewal activities. It provides considerations for restoring confidence in the health care system.

Total provincial/territorial health expenditure in Canada increased from $11 billion in fiscal year 1977/78 to $56 billion in fiscal year 1999/2000.



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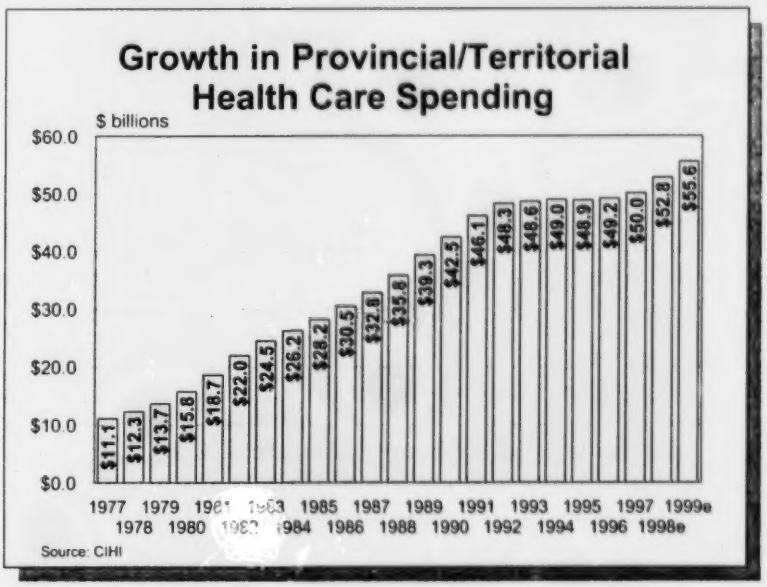
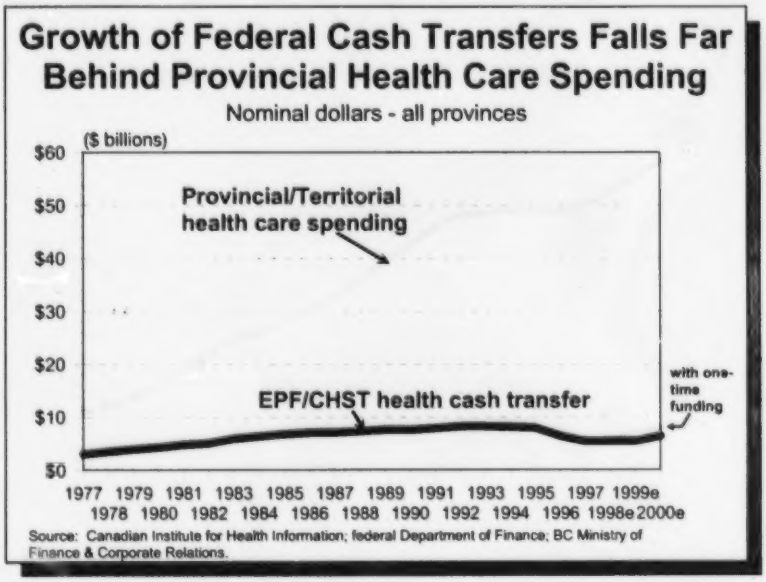


Since 1996, provinces and territories have been reinvesting, partly to make up for the moderate growth in the early years of the decade. In the 1996 to 1999 period, increased spending on health care has averaged 4.2 per cent annually, the same as growth in the economy. Preliminary indications are that the provincial/territorial spending increase for 2000/01 is significantly higher than this.

A long-term look at spending on health care reveals a federal government withdrawing from its partnership with the provinces and territories by reducing its contribution to health care funding. This has resulted in a significant funding gap.

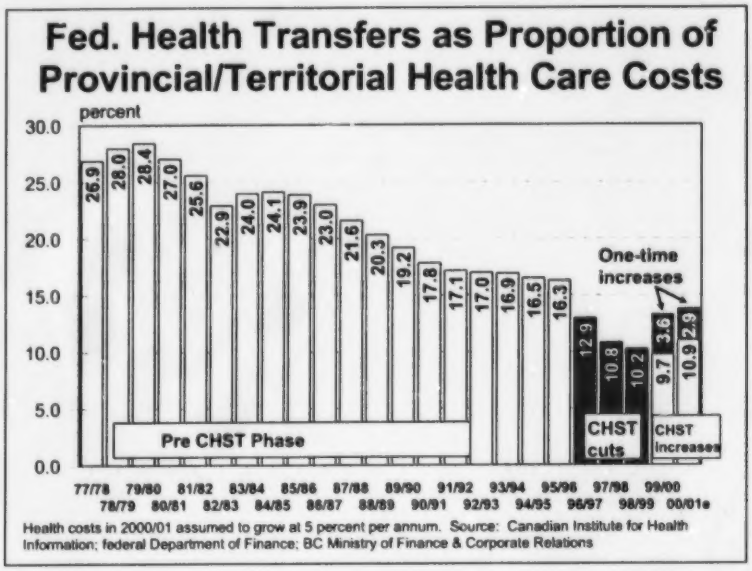
This funding gap represents the difference over time, between what the federal government has contributed to the health care system by way of its transfers to provinces and territories and what the provinces/territories have spent in meeting cost pressures. See chart below.


Growth of Federal Cash Transfers Falls Far Behind Provincial Health Care Spending
Nominal dollars - all provinces
($ billions)
$60
$50
$40
$30
$20
$10
$0
Provincial/Territorial health care spending
EPF/CHST health cash transfer
with one-time funding
1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998e 1999e 2000e
Source: Canadian Institute for Health Information; federal Department of Finance; BC Ministry of Finance & Corporate Relations.

Since the beginning of block funding, the growth of health care spending—including the more moderate years of the middle 1990s—has averaged 0.8 per cent higher than the growth of the economy. Yet the highest escalator attained for block funding was one matching the growth in Gross Domestic Product (GDP) and this existed only for the first few years after the introduction of block funding in 1977. The period from the mid-1980s to the mid-1990s was one of reduced escalators and frozen transfer amounts. In this context, a greatly expanding gap was inevitable.

Further, the federal government made substantial cuts between 1994/95 and 1998/99 in the major transfer helping to fund health care and other social programs. Total federal spending on health care (transfers plus direct spending) declined from a peak of $367 per capita in 1994/95 to $269 per capita in 1998/99. The decline in federal spending on health care is also evident when measured against Gross Domestic Product (GDP). In 1977, federal spending on health care made up 1.4 per cent of GDP, compared to 0.9 per cent in 1998/99.

As the chart below shows, the proportion of provincial/territorial health care costs offset by federal transfers has trended significantly downward since the start of block funding.



At their February 3rd 2000 meeting in Quebec City, the Provincial and Territorial Premiers called for the CHST to be restored by $4.2 billion, with an appropriate escalator to ensure that funding for health through CHST keeps pace with the economic trends and social factors, which impact on the sustainability of the system. This request by the Provincial and Territorial Premiers is quite modest and reasonable. A consideration of the long history of block funding for health care could be used to make the case that the gap—between what the federal government is now contributing and what it might contribute—is significantly larger. For example, if the base CHST amount had been increased since 1994/95 by the comparatively modest increases in health care spending by provinces since that time, it would have been $8.8 billion higher in 2000/01.

In addition to back-filling the funding gap, provinces and territories have also invested heavily in health system renewal and innovations, since the mid-1980s. Every province and territory has responded to changes in medical technology, emerging diseases and chronic conditions, changing medical practice patterns, new pharmaceuticals, and changes in the health needs of their citizens.

All provinces and territories have responded to these changes by implementing system renewal initiatives and innovations aimed at making their health systems more accessible, more appropriate and sustainable, while, at the same time, assuring that high-quality services continue to be provided. In addition, all provinces and territories have worked in partnership with health providers to identify efficiencies and productivity improvements.

Overall, the broad range of provincial and territorial measures and initiatives demonstrate the commitment to "maintain, protect and enhance health status" of their respective citizens. Provinces and territories are committed to the development and continuance of a health system responsive to population health needs within the fiscal resources available to the provinces/territories.

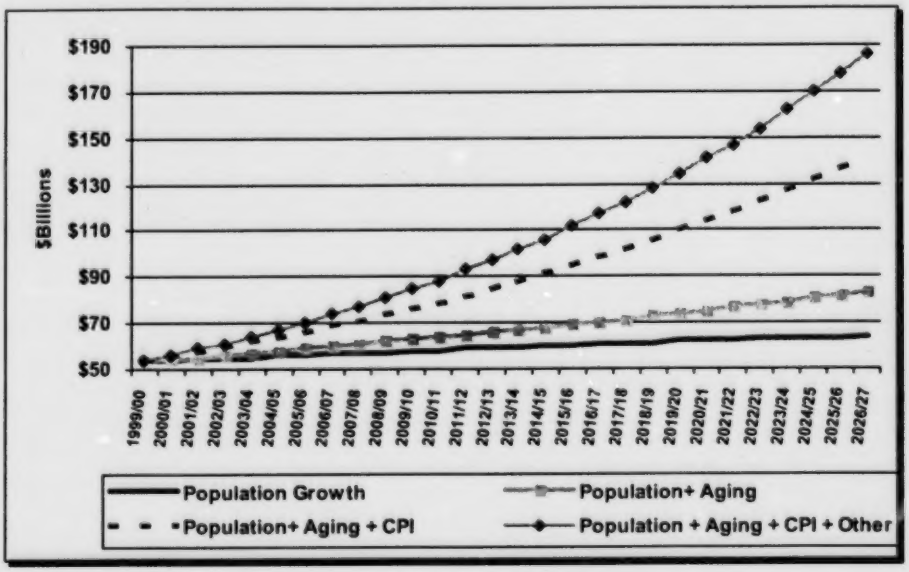
These reforms have also been undertaken to modernize the health system to better serve Canadians. All provinces and territories are implementing health reform in all sectors of the system. These include improvements in the delivery and management of hospital care, improving the access to physician services and primary care, rapid expansion of home care and other community services, investments in long-term care, and improving access to new technologies, including acute care and drug therapies. While these are being implemented at different paces, the direction of reform and investment is consistent. It can be concluded that:

- The purpose of health reform is not to reduce spending levels. It is to improve access, quality and cost effectiveness. It may also help moderate future growth curves.
- Reforms will require significant investments.
- Provinces and territories will continue to identify cost efficiencies, however, it will be extremely difficult to replicate the efficiencies gained in the 1990s in the near term. Cost pressures will continue at a rapid rate.
- It is vital that any application of reforms be flexible, allowing for unique needs and program mixes of individual provinces and territories.

This report also shows that Canadians continue to be well served by their health system. Canada's publicly funded health care system is not in crisis, but the cost pressures and constraints on the system are real. Every province and territory faces a growing demand for health care services fuelled by demographics, new technologies, pharmaceuticals, and other growing costs of providing service.

As the report illustrates, the rising need for additional health services is not sustainable without significant new federal funding. Recent provincial/territorial health care budgets have risen well in excess of inflation, population growth, or the economy. Provincial and territorial health expenditures for Canada are currently close to $56 billion. Even with modest changes in the pattern of service delivery, basic factors (population growth, aging, inflation, rising costs for current programs) are projected to increase health expenditures by approximately five per cent per year. This means provincial and territorial health services expenditures will be $67 billion within five years and almost $85 billion within ten years. However, the report also shows a number of cost accelerators have the potential to raise the growth of costs well in excess of those numbers.

Canada – Health Operating Expenditure Base Scenarios



Examples of accelerators include: emerging and new technologies (such as major joint surgery, neonatal and fetal technologies, dialysis, organ transplantation, genetic testing and therapy), and increased incidence of chronic and new diseases such as heart disease, diabetes, tuberculosis, Hepatitis C, HIV, and AIDS. In addition, new pharmaceuticals, declining productivity gains, and changing expectations will also impact on costs.

It is clear that provinces and territories will have to continue to actively manage the system and seek further productivity measures to help address the magnitude of expenditure pressures and to meet future demand. The public will also need to make informed choices for appropriate use of the system.

It is equally clear that provinces and territories cannot sustain these cost pressures alone. Sustainability requires a federal funding commitment to an immediate, unconditional, and full restoration of the Canada Health and Social Transfer. It also requires federal recognition of the tremendous cost pressures facing the system and, therefore, an appropriate escalator for federal funding through CHST is essential.

Canadians expect their governments to take the necessary actions and work together to ensure confidence in the publicly funded health care system. Provinces and territories are sending a clear signal that they are willing to work with the federal government to meet this Canadian priority.

Section 1: Introduction

Canadians are concerned about the future of Canada's health care system and have consistently identified health care as their top priority. At their 1999 Annual Meeting, held in Quebec City, Provincial and Territorial Premiers agreed to work together to develop practical recommendations for ensuring the integrity and stability of Canada's publicly funded health care system.

Consistent with this, and in context of calling for an adequate federal funding commitment, Provincial and Territorial Premiers wrote to the Prime Minister on February 3, 2000, stating, "the federal government needs to join the provinces and territories as partners in meeting the ongoing health care needs of Canadians." They also asked the Prime Minister for an urgent First Ministers' Meeting on health care. In the absence of federal agreement to an adequate funding arrangement, or a First Ministers' Meeting, Provincial and Territorial Premiers have asked their Health Ministers to continue to work together to consider the sustainability of Canada's health care system.

In the context of the current national debate on the future of Canada's health care system, Provincial and Territorial Premiers note that there are at least three issues at play: the first is sustainability of the current publicly funded health care system; the second is improving Canadians' access to quality health care services through the numerous renewal activities underway; and the third is how best to improve the health status of Canadians.

Repeatedly, Provincial and Territorial Premiers have told the federal government that Ottawa's cuts to the funding it provides provinces/territories for social programs have threatened Canada's health care system. Premiers/Territorial Leaders have not only back-filled those funding cuts, but they have added even more money to their health budgets. But the provincial/territorial funding increases, even when combined with the partial restoration of federal social program funding and the one-time money provided for health care in the 1999 and 2000 budgets, are being outpaced by the tremendous cost pressures and demand for technology, pharmaceuticals and health human resources. These increases constrain the scope of provincial/territorial spending in other social program areas that impact positively on the health status of the population.

As a first step in stabilizing and sustaining their health care system, Provincial and Territorial Premiers have called on the federal government to immediately and fully restore the Canada Health and Social Transfer (CHST) and to put into place an appropriate escalator to ensure that funding for health through the CHST keeps pace with the economic trends, social factors, and changing health technology, which impact on the sustainability of the system.

Provincial and Territorial Premiers expressed this position to the Prime Minister in writing:

> *"In the absence of adequate federal funding, people's confidence in our health care system will continue to erode. We all must work cooperatively to reform and modernize our Medicare system. We acknowledge the need for reform. However, effective reform can only take place once full restoration of CHST with an appropriate escalator has been provided, and we have ensured the stability and integrity of the current system."*

The federal response to the Provincial and Territorial Premiers' position is that provinces/territories must first develop a plan that ties the reform of their health care system to any further increases in federal funding for these vital social programs. This report shows that provinces/territories haven't waited for the federal government's call for reform to begin renewing their health care systems and that each and every province and territory is significantly involved in activities that will improve the access to health care services provided to Canadians.

The federal Minister of Health has acknowledged the work of the provinces and territories and, in turn, has suggested that increased federal funding could be provided if provinces and territories agreed to accelerate and broaden the renewal activities that are already underway. There are significant additional costs associated with that approach, yet the federal government still has to make a long term funding commitment to help sustain existing health programs and services. As a first step, the federal government must fully restore CHST with an appropriate escalator to ensure the future sustainability of Canada's health system.

Provincial and Territorial Premiers asked their Health Ministers to prepare this report, with a particular emphasis on the issue of sustainability of our publicly funded health care systems. This report examines how health care is financed, provides a survey of innovations that are already underway in provinces/territories, examines the cost of broadening the health care renewal activities that are already underway and looks at the current and future cost drivers and cost accelerators in Canada's health system.

Section 2: Historical and Financial Overview

History of the Financial Arrangements Between the Federal Government and the Provinces/Territories

While the Constitution assigns to the provinces and territories exclusive jurisdiction over health care, the federal government has also played a role—effected primarily through transfers[1] that cover part of the expenses incurred by provinces and territories.

This section traces the history and evolution of the federal-provincial/territorial financing arrangements for health care, from the original 50:50 principle of cost sharing through to the progressive federal retreat from health care financing brought about by growth restrictions and funding cuts.

The section will also demonstrate clearly that the severe cutbacks to federal transfers that came with the introduction of the Canada Health and Social Transfer (CHST) in 1996/97 markedly accelerated this federal withdrawal and expanded the funding gap facing health care in Canada today: the increasing difference over time between what the federal government has contributed to the health care system by way of its transfers to provinces/territories and what the provinces/territories have spent in meeting cost pressures. This is clearly illustrated by the fact that the proportion of provincial/territorial health care offset by transfers has significantly fallen, from 26.9 per cent at the beginning of block funding in 1977/78 to 16.3 per cent in 1995/96—just before the introduction of the CHST—reaching its low point of 10.2 per cent only three years later, in 1998/99.

Pre-Block Funding Era (to 1977/78): The 50:50 Sharing Principle

Prior to the introduction of block funding in 1977, the sharing of health care costs on a 50:50 basis was accepted by most provinces as the fairest way to set the funding contribution of the two major partners, the federal government and the provinces.

- Medical Care Act or Medicare (begun in 1968): the federal government contributed 50 per cent of the national cost of services for medical practitioners and for specific designated or prescribed procedures in hospitals.[2]

[1] The history of these arrangements can be traced back to World War II, when provinces withdrew from the personal and corporate income tax fields to help the federal government for the duration of the conflict. These 'temporary" arrangements called in return for the federal government to provide cash transfers to the provinces so that they could finance programs under their responsibility.

[2] An element of equalization was built into this transfer. The federal payment of 50 per cent of national costs was calculated on a national average per capita basis, with the result that every province was paid an equal amount per capita.

- Hospital Insurance and Diagnostic Services Act (HIDSA—begun in 1958): the federal government paid 50 per cent of the costs of eligible expenses for provincial hospitals.[3]

Fifty:fifty sharing was also, for most provinces, the accepted practice for other major program areas—funding post-secondary education and social assistance—which were eventually incorporated into today's CHST.[4] Smaller cost-shared programs also tended to be based on equal contributions from the federal government and the provinces.

Transition to Block Funding (1972/73-1976/77)

The federal government was concerned as early as 1972 about its exposure to cost escalation in programs administered by the provinces/territories. The restraint measures adopted by the federal government resulted in considerable fiscal pressure being applied to provinces/territories:

- A 15 per cent annual growth ceiling was imposed on transfers for post-secondary education from 1972 onwards; it began to restrict transfer entitlements in 1974/75.
- Growth ceilings were also imposed on Medicare, 14.5 per cent for 1976/77; 12 per cent for 1977/78; and 10 per cent thereafter.
- The federal government refused to include as shareable, hospital and medical care expenses, and other growing health care program areas, such as psychiatric services, home care, drug benefits, etc.
- In 1975, the federal government gave notice that it would no longer cost share hospital expenses after 1980.

Further, it should be mentioned that there was some pressure for change being applied by some provinces over the potential of cost-sharing's "50 cent dollars" as it could distort provincial priorities. Put another way, many jurisdictions recognized the need for greater flexibility in allocating federal transfers to health care. Flexibility would help provinces and territories address emerging needs outside the more traditional hospital and physician services areas on which cost-sharing had been focussed.[5]

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[3]An element of equalization was built into this transfer. The federal government paid 25 per cent of each province's actual expenditures plus a per capita payment based on 25 per cent of the national average per capita hospital expenditures.

[4]In 1967, after years of making direct grants to universities, the federal government began to cover—in the form of a transfer to provinces—50 per cent of universities' operating costs. (An option of $15 per capita was made available for those provinces with undeveloped post-secondary systems.) Regarding the Canada Assistance Plan (begun 1966), the federal government covered 50 per cent of the provincial cost of social assistance and services for Canadians in need.

[5]Since the cost sharing era, hospitals and physicians have become less dominant components of overall provincial and territorial health care expenditures (by about 10 percentage points from 1977 to 1999, according to CIHI). EPF was set up in part to recognize new health spending areas. In 1996, considerable emphasis was given by the federal government to the high degree of provincial spending flexibility inherent in the Canada Health and Social Transfer.

The Established Programs Financing (EPF) Era – (1977/78 to 1995/96)

Faced with the situation described above, provinces/territories agreed in 1977 to have health care and post-secondary education funding assistance take the form of a block fund—a transfer that would be unrelated to provincial/territorial program costs.[6]

The new block fund instituted in 1977/78, the Established Programs Financing (EPF) arrangement, had a distinctive characteristic: the federal "contribution" comprised both a cash payment and a notional "tax point value."[7]

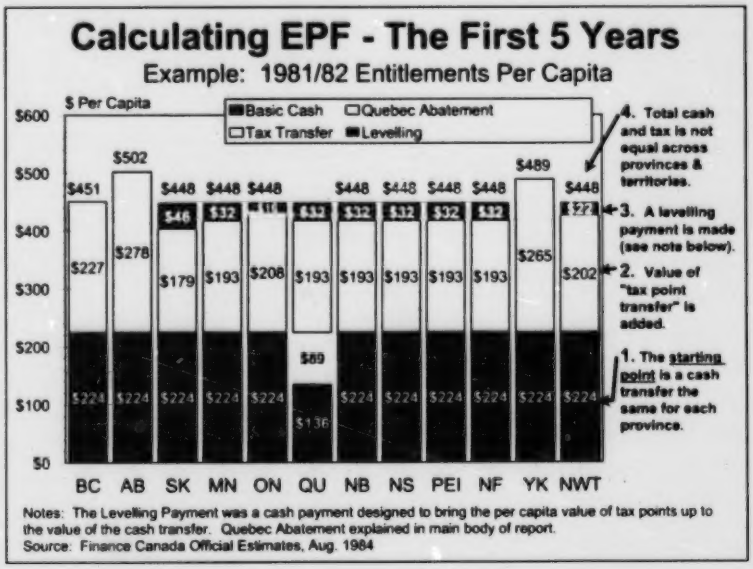

Figure 1

- The tax transfer component reflected the notional value—for a given year—of the one-time transfer of federal "tax room" to the provinces made in 1977/78.
- The cash component constituted an actual payment, or transfer, to provinces/territories.
- Figure 1 illustrates how the tax transfer was designed to have an equalizing effect in the distribution of EPF among provinces. This was the result of a "levelling payment"

[6] The EPF arrangement was federal legislation and not a formal contract among the parties. However, before implementing EPF, the federal government did strive to achieve a consensus between itself and the provinces.

[7] Quebec received no new tax points at this time as the federal government considered half the tax points it had already transferred to Quebec to be related to EPF. In 1964, under an arrangement offered by the federal government to all provinces, Quebec had chosen to receive extra tax points (the Quebec Abatement) in replacement of federal cash transfers related to certain social programs, in keeping with its view that it should have all the fiscal resources necessary to fund the social programs that fall under Quebec's exclusive jurisdiction. Only Quebec opted for this agreement. Thus, federal cash transfers to Quebec are reduced by an amount equal to the notional value of these tax points.

designed to bring the per capita value of the "tax transfer" up to the value of the cash transfer.

It should be noted that while provinces were not unhappy with the block fund concept (including the tax transfer component), they had two important reservations:

- Most provinces felt that the benefits of rising value of tax points should be distributed equally among provinces.
- Provinces were sceptical about the adequacy of the annual escalator—per capita transfer growth rising in accordance with per capita growth in the economy.[8] During negotiations they had argued that the question of the escalator's adequacy should be revisited in 1980.

Regarding the first point, the federal government modified the formula, beginning in 1982/83, to create a new starting point: a "cash and tax" value the same for all provinces/territories. Figure 2 shows how this worked in the final EPF year, 1995/96. With this change, the cash transfer became a residual amount, calculated as total federal "contribution" (cash and tax) less the value of tax points.

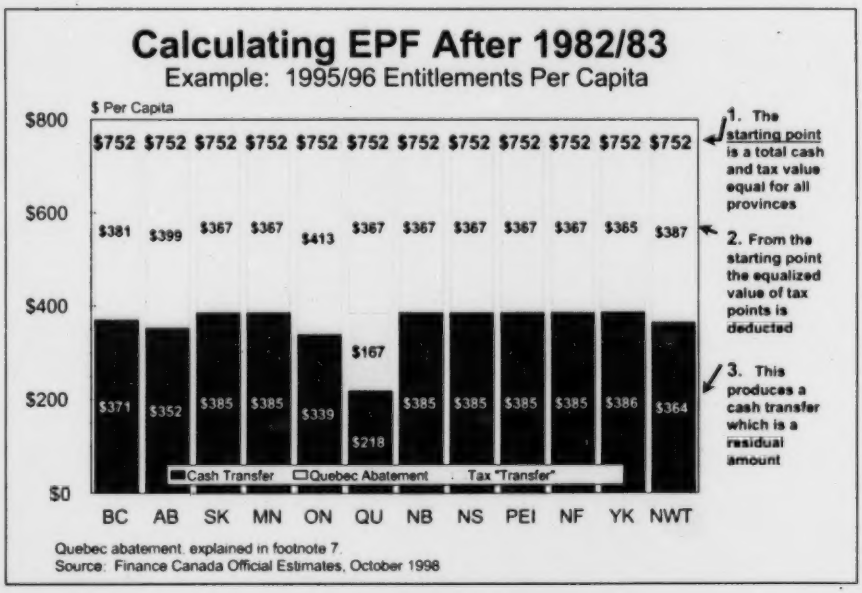
Calculating EPF After 1982/83
Example: 1995/96 Entitlements Per Capita
$ Per Capita
$800
$600
$400
$200
$0
$752 $752 $752 $752 $752 $752 $752 $752 $752 $752 $752 $752
$381 $399 $367 $367 $413 $367 $367 $367 $367 $367 $365 $387
$371 $352 $385 $385 $339 $167 $218 $385 $385 $385 $385 $386 $364
Cash Transfer
Quebec Abatement
Tax "Transfer"
BC AB SK MN ON QU NB NS PEI NF YK NWT
1. The starting point is a total cash and tax value equal for all provinces
2. From the starting point the equalized value of tax points is deducted
3. This produces a cash transfer which is a residual amount
Quebec abatement explained in footnote 7.
Source: Finance Canada Official Estimates, October 1998

Figure 2

[8]Strictly speaking, the escalator reflected average annual growth in the three preceding years.

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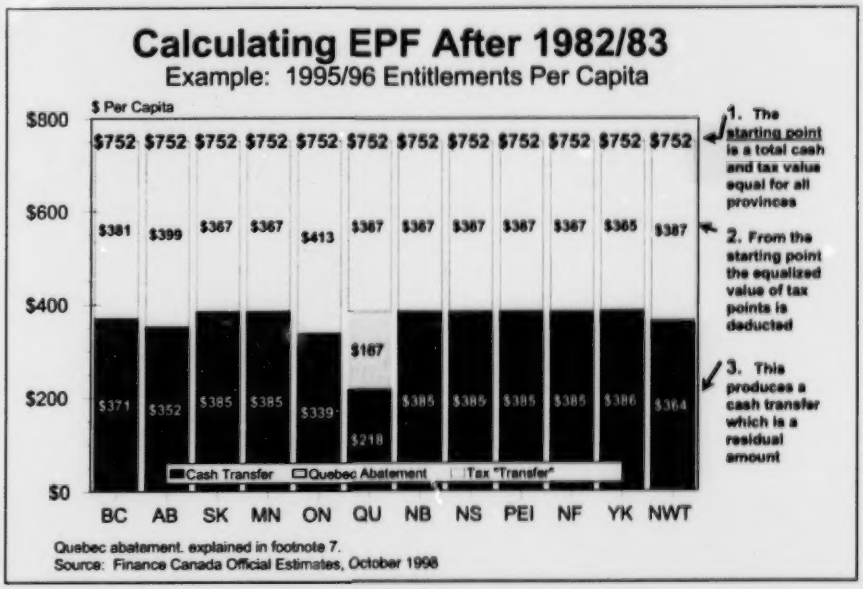
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However, on the question of the escalator, provincial wariness over its adequacy was well founded. Under its original 1977 formulation, EPF cash funding was to increase annually at the rate of growth in the economy. Since provincial costs for the major funding area—health care—have typically grown more quickly than GDP (Figure 3), EPF was effectively a federal restraint program from the start.

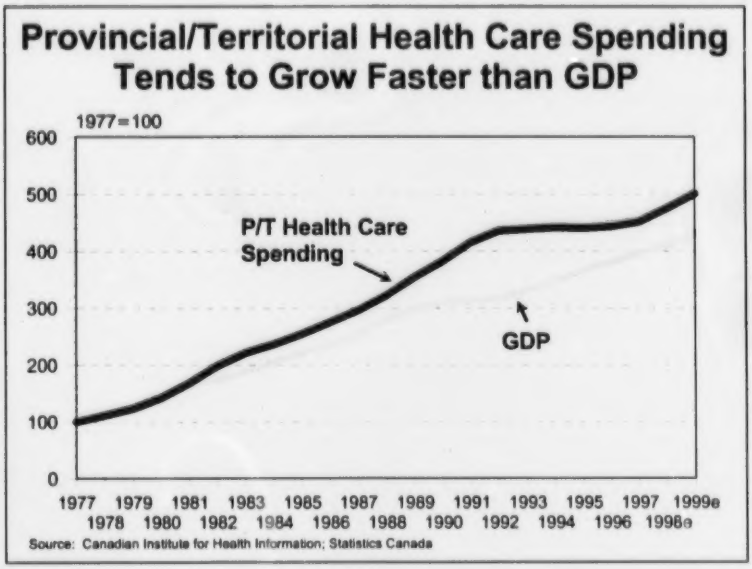
Provincial/Territorial Health Care Spending Tends to Grow Faster than GDP
1977=100
600
500
400
300
200
100
0
P/T Health Care Spending
GDP
1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998e 1999e
Source: Canadian Institute for Health Information; Statistics Canada

Figure 3

Despite the essential restraint nature of EPF, the federal government began to seek even greater savings. Contrary to the understanding among Premiers on the essential nature of block funding, which had launched EPF in 1977, the following restraint measures were implemented unilaterally:[9]

- In 1982/83, the transfer was reduced by about $1 billion.[10]
- Growth of the post-secondary education portion of EPF was limited to six per cent in 1983/84 and five per cent in 1984/85.
- Beginning in 1986/87, the annual escalator was reduced to per capita increases in GNP less two per cent.
- From 1990/91 to 1994/95, the total per capita transfer was frozen.
- In 1995/96, the escalator became GNP less three per cent.

[9] It should be noted that these changes did not negatively affect the territories because changes to EPF were offset by the Formula Financing Grant.

[10] This involved the cancellation of partial federal compensation for a previous federal termination of a tax related program (the so-called "revenue guarantee," which recompensed provinces for negative impacts of federal income tax base changes). This revenue guarantee compensation had been incorporated into EPF in 1977 and during the first five years of EPF the federal government publicly deemed it to be a contribution to health care and post-secondary education.

The Canada Health and Social Transfer (CHST) Heralds a Major Decline in Transfers

With the introduction of the Canada Health and Social Transfer (CHST) in 1996/97, the federal government unilaterally initiated a major change in the way it provided funding to provinces/territories in support of health, post-secondary education and social services.

The EPF and Canada Assistance Plan transfers were combined into a single block fund. At the same time, the federal government imposed significant cuts in the level of transfers to the provinces/territories. As Figure 4 shows, these cuts were significant. By 1997/98, the value of the federal transfer had fallen to $12.5 billion.[11] The CHST was $6.2 billion—or 33 per cent—less than EPF and CAP had been in 1994/95.[12]

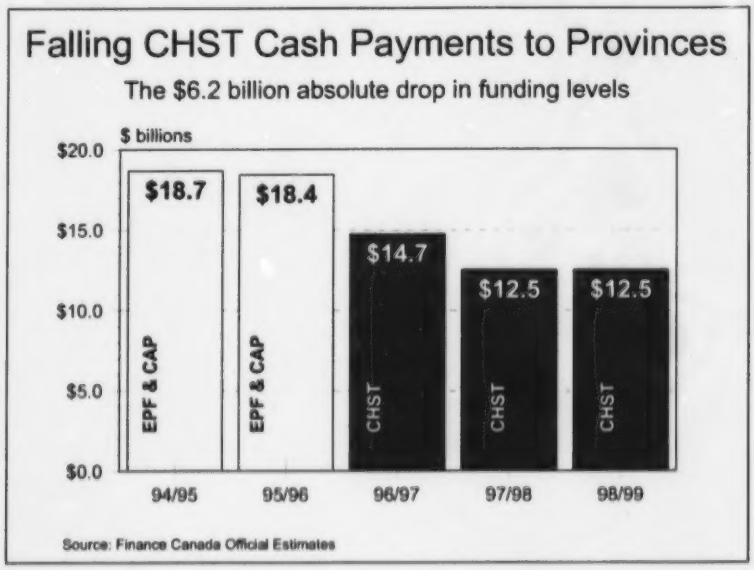

Figure 4

As mentioned earlier, the CHST was intended to give provinces and territories additional flexibility in addressing priorities within the social programming area. Health care came to be seen as the number one social programming priority as the 1990s progressed.

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[11]The CHST had originally been set by the federal government to fall to $11 billion, but this "floor amount" was increased in 1997 to $12.5 billion. In this document, for purposes of consistency with the presentation of federal budget documents, CHST cash includes the notional value of part of the tax room that was transferred to Quebec in 1965 (the Quebec Abatement, see footnote 7), despite the fact that it is a tax transfer.

[12]As was the case with EPF, the Formula Financing Grant for the territories offset cuts accompanying the CHST introduction in 1996/97. However, the Grant's Gross Expenditure Base was cut by 5 percent in 1996/97. The cuts ($56 million to the NWT and $20 million to the Yukon) were proportionately larger than a cut to the CHST would have been. This cut has never been restored, although the territories have been allowed to keep the (much smaller) increases to the CHST made in the past few years.

The 1999 and 2000 Federal Budgets: Partial Restoration of CHST and Institution of One-Time Transfers

With its 1999 budget, the federal government began to increase the value of the CHST transfer beyond its $12.5 billion floor. It did this with two measures:[13]

- A one-time CHST Supplement for Health Care of $3.5 billion; and
- A $2.5 billion increase in the CHST cash base amount (from $12.5 billion to $15 billion) over a three-year period, beginning in 2000/01.

The 2000 Federal Budget announced a further one-time CHST Supplement of $2.5 billion. This was targeted by the federal government to both health and post-secondary education. Figure 5 shows the impact of these changes.[14]

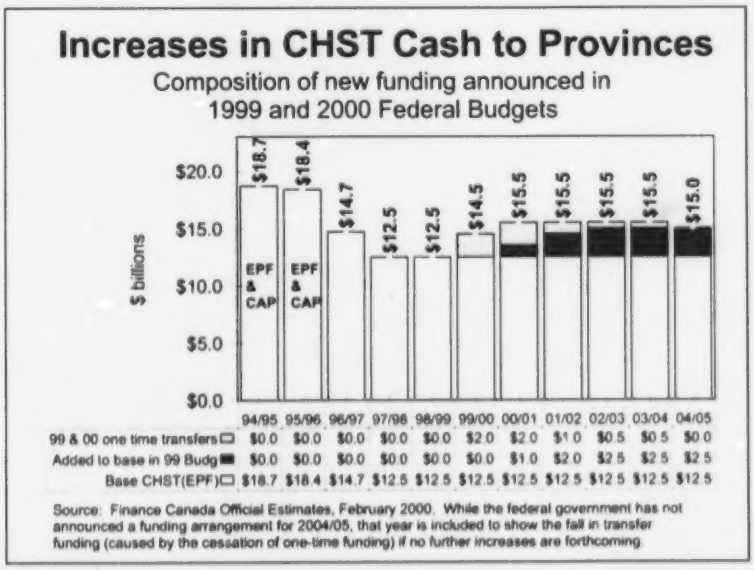
Increases in CHST Cash to Provinces
Composition of new funding announced in 1999 and 2000 Federal Budgets
$ billions
$20.0
$15.0
$10.0
$5.0
$0.0
$18.7
$18.4
$14.7
$12.5
$12.5
$14.5
$15.5
$15.5
$15.5
$15.5
$15.0
EPF & CAP
EPF & CAP
94/95 95/96 96/97 97/98 98/99 99/00 00/01 01/02 02/03 03/04 04/05
99 & 00 one time transfers $0.0 $0.0 $0.0 $0.0 $0.0 $2.0 $2.0 $1.0 $0.5 $0.5 $0.0
Added to base in 99 Budg $0.0 $0.0 $0.0 $0.0 $0.0 $0.0 $1.0 $2.0 $2.5 $2.5 $2.5
Base CHST(EPF) $18.7 $18.4 $14.7 $12.5 $12.5 $12.5 $12.5 $12.5 $12.5 $12.5 $12.5
Source: Finance Canada Official Estimates, February 2000. While the federal government has not announced a funding arrangement for 2004/05, that year is included to show the fall in transfer funding (caused by the cessation of one-time funding) if no further increases are forthcoming.

Figure 5

[13]A third measure, which did not affect the overall value of the CHST, but did affect its distribution among provinces, was a three-year move to equal per capita allocation of CHST entitlements, beginning in 1999/00. Equal per capita was to be achieved on a "cash and tax" basis; not cash alone.

[14]Figure 5 shows the one-time supplements allocated over the 1999/2000 to 2003/04 period in the manner used by the federal government for illustrative purposes in its budget. However, provinces and territories are free to choose a usage schedule other than this and many are doing so. Further, an allocation of the 2000 Supplement between post-secondary education and health care was not made by the federal government. For illustrative purposes the following allocation has been used: one-third for PSE and two-thirds for health care.

Aside from the fact that the one-time amounts fall far short of 1994/95 funding levels, provinces and territories are reluctant to consider them as a federal contribution to a sustainable CHST because of their time-limited nature. One-time funds prevent provinces and territories from conducting strategic medium term planning for their health care budgets in that there is no guarantee that the additional dollars will be available in the following year.

A further obstacle to sustainability is that no heed has been paid by the federal government to the provinces' and territories' request—made repeatedly—that an annual escalator be applied to the CHST cash transfer. The problem of utilizing an adequate escalator has plagued health care transfers since the start of block funding, but it has become much more acute with the current unwillingness of the federal government to consider any escalator for its social transfers.

THE CHST TAX POINTS—A LEGITIMATE FEDERAL TRANSFER?

The notional "tax transfer" component of the EPF arrangement was carried over into the CHST, which means that for the past 23 years, the federal government has designated the current year value of this 1977 transfer[15] as part of its contribution to provincial social programming.

Figure 6 shows that the federal practice of including the tax component has—particularly in recent years—had the effect of making the CHST transfer appear larger than it actually is, and making the CHST cuts appear smaller.

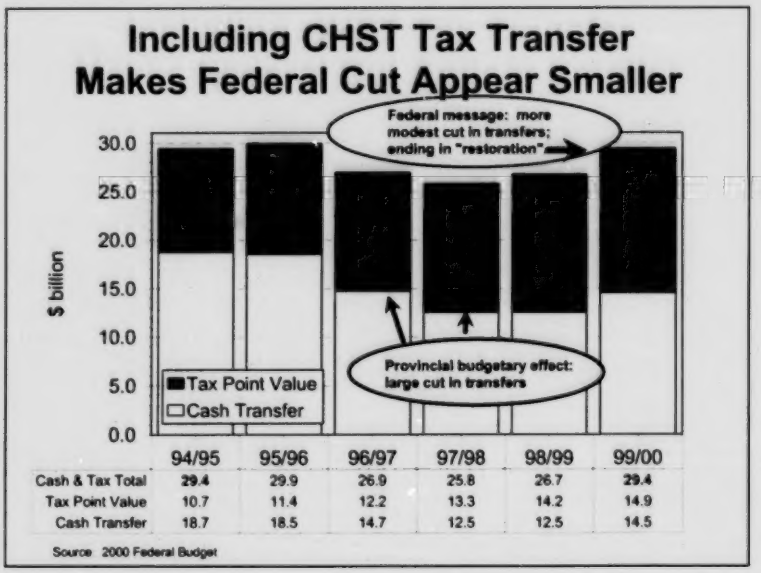
Including CHST Tax Transfer
Makes Federal Cut Appear Smaller
Federal message: more modest cut in transfers; ending in "restoration"
Provincial budgetary effect: large cut in transfers
$ billion
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Tax Point Value
Cash Transfer
94/95 95/96 96/97 97/98 98/99 99/00
Cash & Tax Total 29.4 29.9 26.9 25.8 26.7 29.4
Tax Point Value 10.7 11.4 12.2 13.3 14.2 14.9
Cash Transfer 18.7 18.5 14.7 12.5 12.5 14.5
Source 2000 Federal Budget

Figure 6

[15] 1965 in Quebec's case.

However, provinces/territories do not consider it legitimate to count the tax point value as part of the CHST transfer each year:

- While the federal government undoubtedly reduced its revenue by transferring tax points to the provinces/territories many years ago, the tax point "transfer" has never signified an actual transfer since then.
- Almost all independent experts dispute designating the tax points as a federal contribution to health care.[16]
- The CHST "tax transfer" appears nowhere in the federal government's Public Accounts.
- As the following federal budget statements attest, it doesn't show up as an expenditure in federal budgets:
  - Only CHST cash transfers are included by the federal government in its list of federal program spending. The CHST "tax transfer" is not included as federal spending.[17]
  - The 1997 federal budget admits, "only the cash transfer affects (federal) program spending."[18]
  - The revenue used to support the CHST "tax transfer" is not included by the federal government in its list of federal revenue.[19]
- The tax "transfer" is accounted for by provinces/territories as "own-source" revenue, since it is revenue collected from provincial/territorial tax effort. For over 23 years (35 years in Quebec), taxpayers have been paying these income taxes directly to their provincial governments. They hold their provincial/territorial governments accountable for these taxes and their disposition as program spending. Canadians do not hold the federal government accountable for the collection or the use of these tax dollars. In these circumstances, it is misleading to claim that these provincial/territorial income tax revenues come from or are contributed by the federal government.

[16]Examples include: Professor Allan M Maslove, School of Public Administration, Carleton University: "These tax points are now firmly part of the provincial tax 'room' and should not be regarded as part of any existing transfer from Ottawa." The National Forum on Health: "The federal government has no control over the use of these tax points, nor do they constitute an expenditure or revenue item in the federal budget. They do, however, provide a convenient shield for the federal government to reduce its cash outlays while claiming that overall entitlements are only frozen or marginally increasing. For these reasons, the forum considers the inclusion of tax points in the federal contribution to be confusing and unhelpful."
[17]Federal Budget Plan 2000, p. 66, Table 3.6, and p. 129, Table 6.1.
[18]Federal Budget Plan, 1997, p. 65.
[19]Federal Budget Plan 2000, p. 60, Table 3.5.

- Although the federal government vacated a portion of its personal (and corporate) income tax base in 1977/78, within ten years it had increased its share of the tax burden to such an extent that it offset all of the tax room previously vacated (Figure 7).

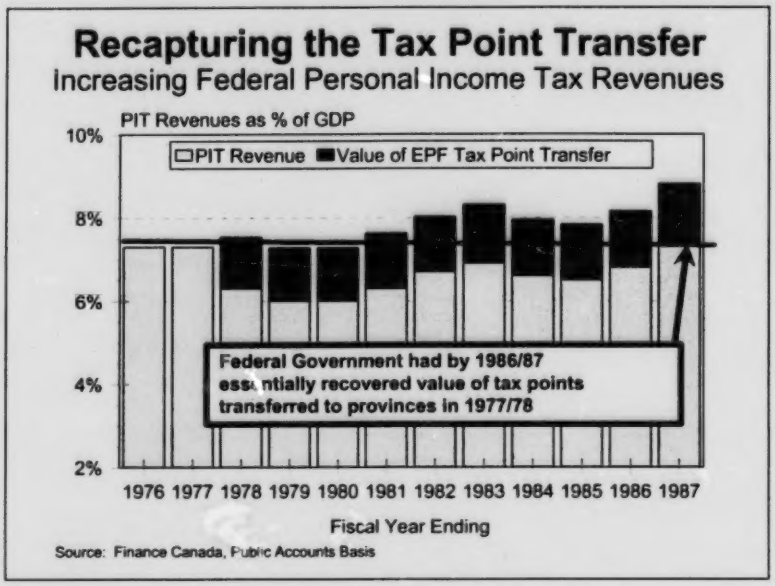
Recapturing the Tax Point Transfer
Increasing Federal Personal Income Tax Revenues
PIT Revenues as % of GDP
10%
8%
6%
4%
2%
PIT Revenue
Value of EPF Tax Point Transfer
Federal Government had by 1986/87
essentially recovered value of tax points
transferred to provinces in 1977/78
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987
Fiscal Year Ending
Source: Finance Canada, Public Accounts Basis

Figure 7

- A transfer of tax room needed to rebalance the finances of the nation, or fulfil some other national goal, should not be considered in perpetuity a permanent contribution to the finances of the other order of government.
  - In 1942, to aid the World War II effort, the provinces and municipalities transferred to the federal government the collection of all personal and corporate taxes. Provincial-local revenues dropped from 59 per cent of the Canadian total to 23 per cent. Yet in the aftermath of this tax transfer, the provinces did not begin labelling the transferred revenues as a permanent contribution to federal programs.
- Finally, it should be emphasized that while the tactic of including the "tax point transfer" has helped the federal government to reduce the apparent size of transfer cuts in recent years, it cannot mask the longer term decline in federal participation in health care.[20]

[20]Measuring EPF against health care expenses is not a precise exercise in that consensus was never reached on what portion of EPF could be considered an appropriate health care contribution. The federal government wrote separate transfer cheques for health care and post-secondary education but these did not correspond closely to most provinces' spending patterns, particularly in the middle and later years of EPF. Nor did this federal apportionment affect provincial budgetary allocations between health care and PSE. However, in that no alternate allocation was ever developed, the federal apportionment is used in this report. With the coming of the CHST, there was no longer any division among programs for transfer cheque purposes. In Figure 8, the health share of the CHST cash amount should be considered a reasonable indication only. It is estimated by applying the 1995/96 health portion of combined EPF and CAP to the CHST.

Figure 8 shows that this decline is very apparent, regardless of whether or not tax points are deemed to be a federal contribution.

Figure 8

Section 3: The Spending Picture

A longer term look at spending on health care reveals a federal government gradually withdrawing from its partnership with the provinces and territories in providing health care funding. The provinces and territories have increasingly had to cope by themselves with the fiscal pressures produced by health care cost challenges.

Federal Spending on Health Care Over Time

Federal government spending on health care has two components:

- As discussed above, the primary federal contribution to Canada's health care system is made through cash transfers to provinces.[21]
- The federal government also spends a smaller amount on direct health care expenditures, including services for special groups such as Aboriginal people, armed forces and veterans, as well as expenditures for health research, health promotion and health protection. Direct federal health care spending is more visible to the public and can be more easily attributed to the federal government than transfers to provinces/territories.

Figure 9 presents the history of this spending. It contrasts the substantial $6.2 billion cut made to transfer funding (with the onset of the CHST) with the increase in federal direct spending on health care. In other words, the federal government did not impose the same tough decisions on itself as it did indirectly on the provinces through CHST cuts.

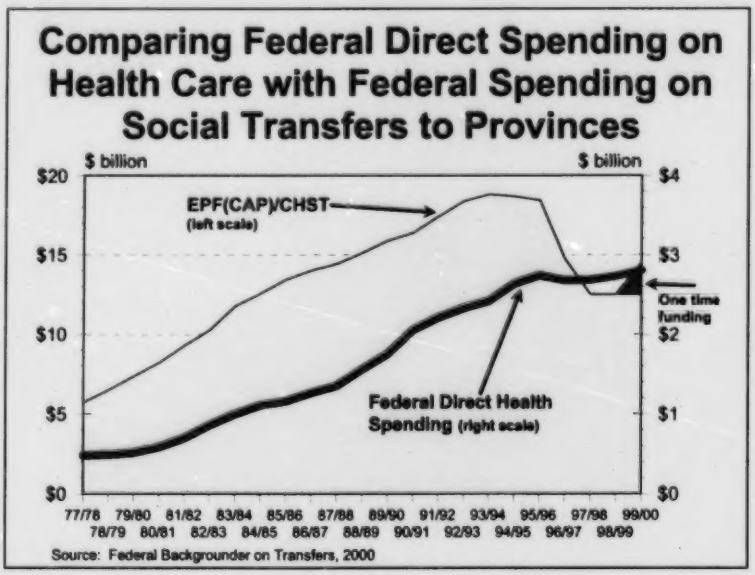

Figure 9

[21] Comparatively small amounts are also given for specific health care purposes to many provinces via conditional grants.

Federal spending on health care has also fallen as a percentage of total federal program spending. Comparing federal health spending with total program spending reveals the true budgetary decisions made by the federal government[22].

- In 1977/78, total federal spending on health care made up 8.2 per cent of program spending.
- In 1999/00, it had fallen to 7.4 per cent.

OFFLOADING IN ABORIGINAL PROGRAMMING

Another area of long-standing concern to the provinces/territories is the issue of funding for Aboriginal health. Slower rates of increase in federal funding for services to First Nations' people, combined with the transfer of Medical Service Branch's health programs to either band/tribal control and management, has resulted in federal offloading of costs to provinces/territories.

As the following examples demonstrate, provincial/territorial health care expenditures for the Aboriginal population, particularly in the Prairie provinces, British Columbia and the Territories, can be projected to grow at a greater rate than the rest of the population:

- Rate of population growth (e.g., an average annual growth rate of 1.9 per cent versus a projected rate of 0.3 per cent for non-Aboriginal population in Manitoba)
- Mortality and morbidity rates for Aboriginal population (e.g., Aboriginal children in Manitoba, aged one month to 14 years, are 4.4 times more likely to die than non-native children of the same age)
- Utilization of acute care services by the Aboriginal population (e.g., Saskatchewan and Manitoba estimates show that per capita costs for acute care health services to First Nations are at least double the per capita costs for the general population)
- Slower rates of increase in federal health spending on First Nations people, potentially resulting in federal offloading for services to the First Nations population (e.g., Saskatchewan expenditures on First Nations' health have grown by approximately 16 percent between 1995 and 1998 and are expected to grow in the next three years as well. Projections for 1999 and beyond show that provincial expenditures on First Nations' health services are projected to increase at a significantly faster rate than federal expenditures in the next few years. This gap is widening; by 2001, Saskatchewan is estimated to spend about $16 million more than the federal government.

[22]Non discretionary federal spending, such as public debt charges, is not used in the comparison.

Provincial/Territorial Spending On Health Care Over Time

Total provincial/territorial health expenditures in Canada increased from $11 billion in fiscal year 1977/78 to $55.6 billion in fiscal year 1999/2000, an average growth rate of seven per cent per year (Figure 10).

Figure 10

There have been three distinct periods of health care funding since 1977 (Figure 11).

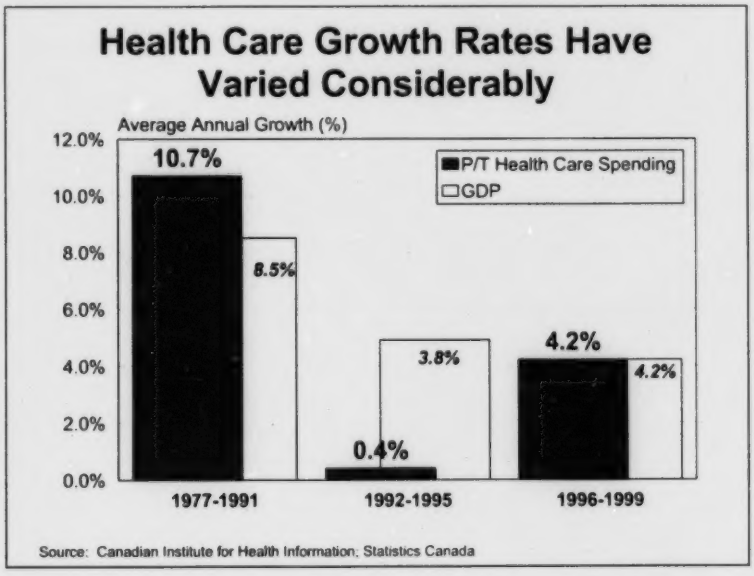

Figure 11

PROVINCIAL/TERRITORIAL SPENDING ON HEALTH CARE OVER TIME

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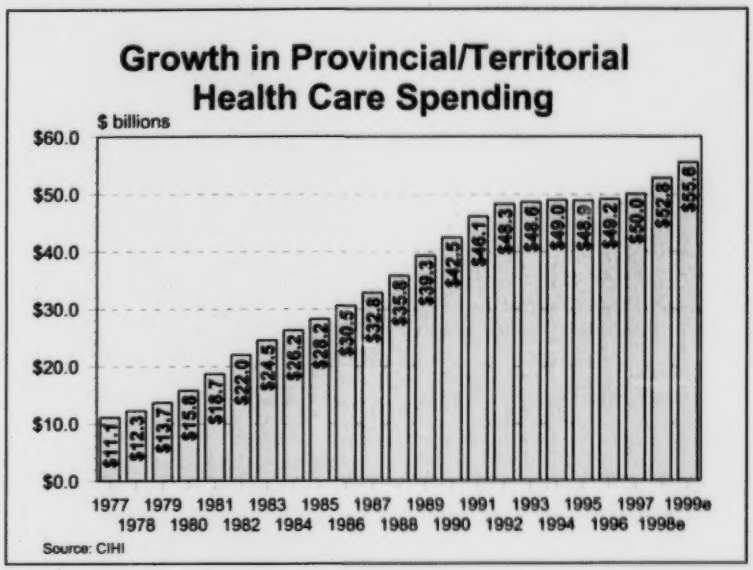

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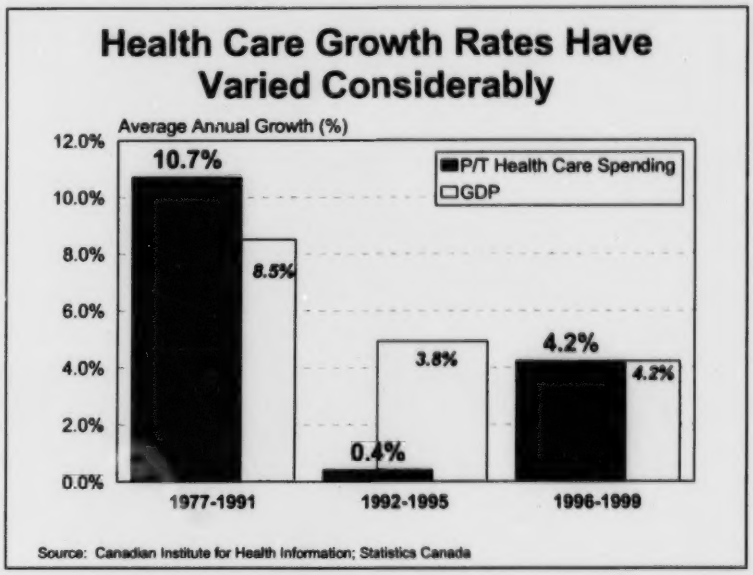

Figure 11

- The first period was one of growth, which was not limited by acute fiscal considerations. In this period, the average annual growth in health care spending increase was 10.7 per cent, 2.2 percentage points above the average annual growth in the economy.
- The severe restraint directed toward health care in the early-to-mid 1990s produced a very low annual average growth rate. In addition to the general fiscal goal of deficit reduction, there was an emphasis on productivity gains in the hospital sector, regionalization, and other restructuring applied to the health care system.
- Since 1996, provinces and territories have been reinvesting, partly to make up for the restraint applied in the early years of the decade. In the 1996 to 1999 period, spending on health care has averaged 4.2 per cent, the same as growth in the economy.
- Indications are that the rate of increase in health care spending has been rising over the past year or two.[23]

Figure 12 shows how spending patterns altered during the 1990s. Counterbalancing areas such as hospitals, where reforms enabled reduced cost escalation, were areas of high cost growth such as drugs (87 per cent increase) and the Canadian Institute for Health Information's "other" category, which includes home care, which experienced a 50 per cent increase in spending.

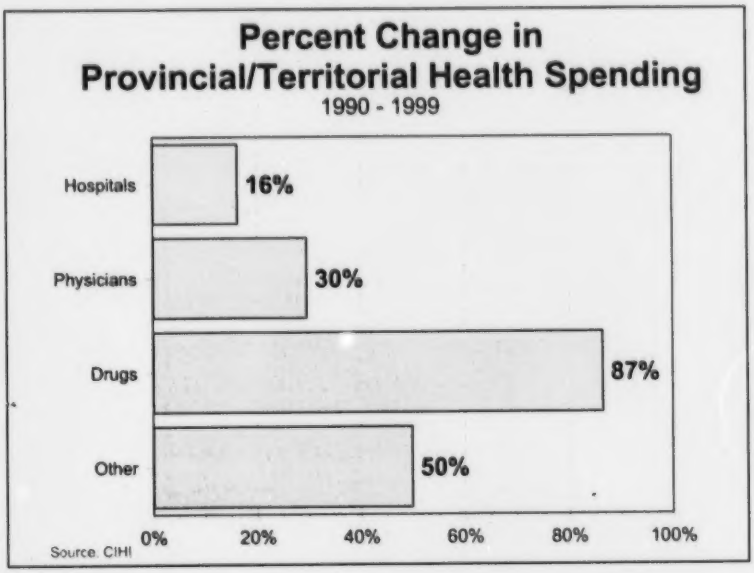

Figure 12

[23] CIHI estimates for 1999/00 were based on 1999 budgetary projections. For all provinces and territories, this increase was forecast at 5.3 per cent. Updated spending estimates now available indicate that this figure is conservative and that the actual spending increase in that year is over eight per cent.

Section 4: The Funding Gap

The funding gap represents the increasing difference over time between what the federal government has contributed to the health care system by way of its transfers to provinces and territories, and what these jurisdictions have spent in meeting cost pressures.

As was demonstrated earlier in this report, a funding gap was almost inevitable from the start of the block funding arrangement. At best—i.e., during the early years of EPF—federal transfers were permitted to increase only at the pace of national economic growth. Yet these transfers contributed to the funding of provincial health care programs whose growth was almost invariably higher than this.

With the restraints and cuts introduced in the 1980s and 1990s, the growth of the federal transfer for health care slowed markedly. After 1994/95, the transfer declined sharply. This situation of federal reductions occurring at the same time as increasing provincial/territorial spending caused a marked acceleration of the funding gap.

Figure 13 shows the weakness of the growth of the cash transfer in relation to strong provincial and territorial health care costs.

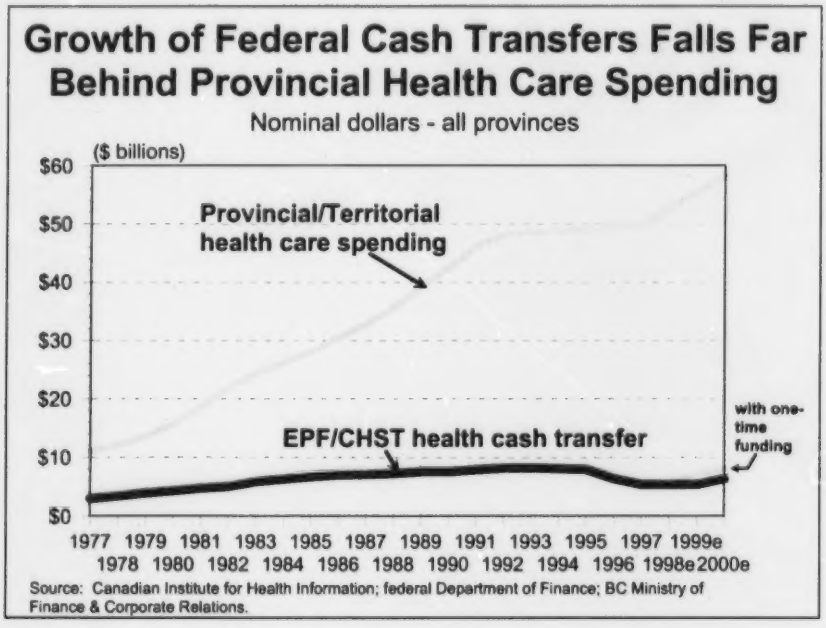
Growth of Federal Cash Transfers Falls Far Behind Provincial Health Care Spending
Nominal dollars - all provinces
($ billions)
$60
$50
$40
$30
$20
$10
$0
Provincial/Territorial health care spending
EPF/CHST health cash transfer
with one-time funding
1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999e
1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998e 2000e
Source: Canadian Institute for Health Information; federal Department of Finance; BC Ministry of Finance & Corporate Relations.

Figure 13

What this has meant, as shown in Figure 14, is that since the start of block funding, the proportion of provincial/territorial health care costs offset by federal transfers has trended significantly downwards.

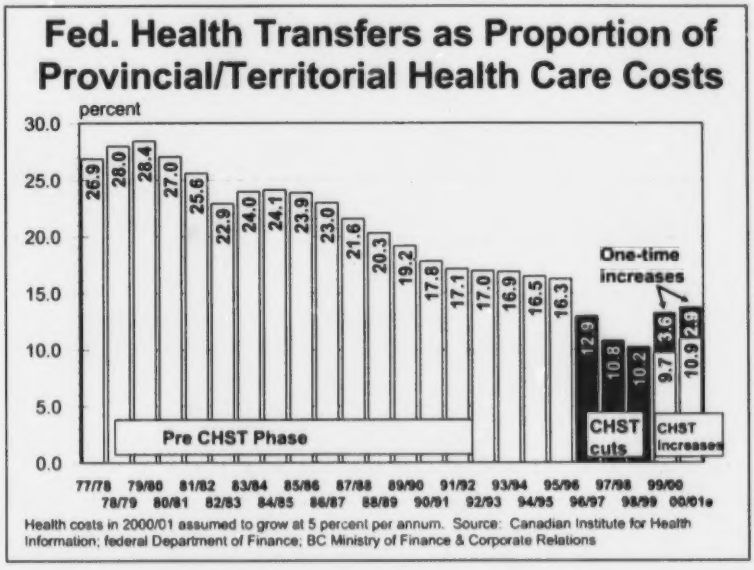

Figure 14

Long before the CHST, years of federal transfer restrictions had significantly reduced the federal government's proportional share of provincial/territorial health care programming costs. The federal share, which stood at 26.9 per cent in 1977/78, had fallen to 16.3 percent in 1995/96 at the onset of the CHST. This is a decrease of nearly 40 per cent.

The deep cuts accompanying the introduction of the CHST reduced this share considerably, so that it stood at just 10.2 per cent in 1998/99. Over a period of 21 years, the share of health care funding supported by the federal government fell by 62.1 per cent.

The increases announced in the 1999 and 2000 Federal Budgets produced a small improvement in the federal funding share. The majority is one-time funding, which prevents provinces and territories from conducting strategic medium term planning for their health care budget. However, in the absence of an escalator for CHST cash, this share will steadily decline in future years.

ADDRESSING THE FUNDING GAP

To address the problem of the funding gap, year 1994/95 has been chosen by Premiers as a benchmark against which restoration is measured. At their February 3rd 2000 meeting in Quebec City, the Provincial and Territorial Premiers called for the CHST to be increased by $4.2

M121

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billion, with an appropriate escalator to ensure that the CHST cash transfer keeps pace with the economic trends and social factors, which impact on the sustainability of the system.[24]

Considering how large the funding gap has become over the years, this request by Premiers is very moderate. A very good case could be made that the gap between what the federal government is now contributing and what it might appropriately contribute is significantly larger. Figure 15 shows amounts to which the CHST would have grown, had this transfer been increased at the same fairly modest rate as provincial/territorial increases in spending for health care since 1994/95. This would have given rise to a CHST cash transfer of more than twice the amount requested by the Premiers.[25]

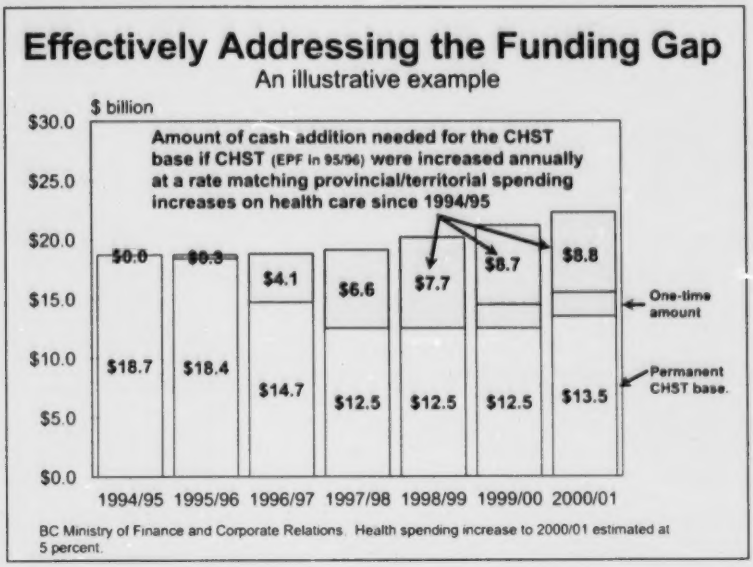

Figure 15

To repeat, the Provincial and Territorial Premiers' request for full CHST restoration to 1994/95 levels is very reasonable, as is their request for an appropriate escalator to safeguard the real value of future federal contributions to health care.

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[25] It is worth noting that the CHST would have become significantly larger still if it had reflected—even for health care alone—a restoration of the funding partnership existing in the early years of block funding.

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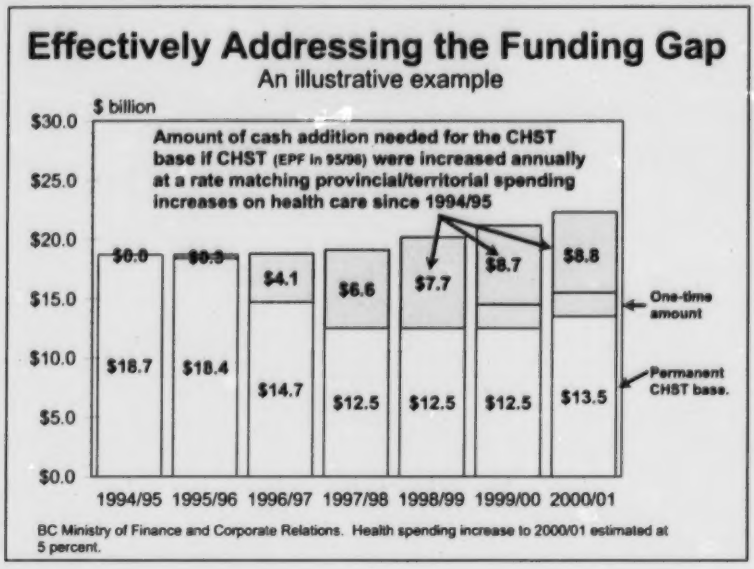

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Section 5: Health System Innovations

PROVINCES AND TERRITORIES, 1990 - 2000

Provincial and territorial governments have long been involved in the issue of renewal and innovation in health care. The escalating growth in cost pressures over the last two decades has demonstrated the need for sound management and system renewal in every jurisdiction. The pressures on the health system have been exacerbated by the significant cuts of federal funding documented above.

All provinces and territories have responded to the challenges by implementing system renewal initiatives and innovations aimed at making their health systems more accessible, more appropriate and sustainable while, at the same time, assuring that high-quality services continue to be provided.

Provinces and territories have shown leadership in achieving those goals. Provinces and territories have also responded in a variety of ways to the particular challenges facing their systems. Every province and territory has responded to changes in medical technology, emerging diseases and chronic conditions, changing medical practice patterns, new pharmaceuticals, and changes in the health needs of their populations.

HEALTH SYSTEM RENEWAL PLANNING

Since the early 1990s, most provinces and territories have developed and implemented a number of important strategic policy and planning documents focusing on renewal of the health system. The health system comprises an interconnected network of hospitals, clinics, public health services, community mental health services, prevention strategies, diagnostic services, independent providers, regulatory bodies, professional organizations and voluntary agencies. It is by far the most complex publicly funded social program of each province and territory. As provinces and territories responded to the need to modernize and renew their health systems in the face of the challenges noted above, they recognized the importance of careful strategic and operational planning. The first and foremost consideration was to protect the health of Canadians and the interests of patients as they engaged in system renewal. Some examples of system renewal planning documents that have been implemented since the early 1990s include:

Newfoundland: "Provincial Strategic Social Plan - People, Partners and Prosperity" (1998).

Prince Edward Island: "Health Reform: A Vision for Change" (1991), "Partnership for Better Health" (1993).

Nova Scotia: "Health Strategies for the Nineties" (1990), "Blueprint for Health System Reform" (1994).

New Brunswick: "Reinvesting in a Sustainable Health System" (1995), Premier's Health Quality Council (1999).

Quebec: "Commission d'enquête sur les services de santé et les services sociaux - Commission Rochon" (1988), Rapport Arpin (1999).

Ontario: "Making it Happen - Mental Health Reform" (1999), Health Services Restructuring Commission.

Manitoba: "Quality Health for Manitobans - The Action Plan" (1992), Five-Point Action Plan to End Hallway Medicine (2000).

Saskatchewan: "A Saskatchewan Vision for Health: A Framework for Change" (1992), "A Guide to Core Services for Saskatchewan Health Districts" (1994).

Alberta: "Rainbow Report - Our Vision for Health (1990); Alberta's Six-Point Plan (2000)

British Columbia: "Health Goals for British Columbia" (1998), B.C. Royal Commission on Health Care and Costs - Closer to Home (1991).

Yukon: Health Summit: Making Health Happen (1999).

Northwest Territories: "Our Communities, Our Decisions" (2000).

Nunavut: Department of Health and Social Services was established April 1st, 1999; three regional health boards integrated into the department on April 1st, 2000.

GOVERNANCE AND RENEWED SERVICE DELIVERY STRUCTURES

Since the very beginning of health services in the provinces and territories, the health system structure in every jurisdiction has consisted of a mix of private, public, charitable and non-profit hospital boards, government departments and commissions, research and funding agencies, a mixture of public and private service delivery mechanisms, and a wide variety of organizations delivering preventative and clinical health services. All provinces and territories have recognized the importance of better integration of service delivery. They have also recognized the importance of improving service delivery and funding accountability of service providers. There have been many approaches to governance reform, restructuring and renewal, in order to better achieve an integrated continuum of services and better accountability.

For example, several jurisdictions implemented major restructuring and reform of their mental health services, such as Quebec's "Politique de santé mentale," Manitoba's "A New Partnership for Mental Health in Manitoba," territorial mental health strategy in the Northwest Territories, Ontario's community mental health strategy, and Alberta's "Future Directions for Mental Health Services in Alberta."

Regionalization was another significant strategy adopted by most jurisdictions in order to better integrate services. For example, Prince Edward Island, Nova Scotia, British Columbia and Manitoba established regional boards in 1994 following Saskatchewan's, Newfoundland's and Quebec's earlier regionalization. Nova Scotia and Alberta established district health authorities and regional health boards in 1995. Ontario restructured their district health councils in 1996. Regionalization also involved new funding and accountability mechanisms. For example, Quebec decentralized their health services budget in 1996. Several jurisdictions, notably Ontario, Saskatchewan, Alberta, Manitoba and New Brunswick established business plans or service requirements for their service delivery systems.

Other restructuring examples include the creation of a Health Promotion Chair in Alberta, a Women's Health Council in Ontario, a Provincial Health Council in Nova Scotia and the establishment of the Health Partnership Development Committee with Yukon First Nations. Nunavut integrated three regional health boards into the department.

HEALTH HUMAN RESOURCES

All jurisdictions face challenges in recruitment, retention and distribution of the appropriate mix of service providers. Because of the long lead times required for training and retraining physicians, nurses and allied health professionals in the face of changing technological and societal needs, health human resource policy remains a difficult challenge.

All provinces and territories participated in the national policy direction on physician strategy, which resulted in national guidelines and targets for medical school enrolment and post-graduate medical education positions (the "Barer/Stoddard Report").

Provinces and territories have also implemented a wide variety of health professional training, recruitment and retention strategies. For example, New Brunswick established a Physician Resource Management Plan in 1992. PEI established a Physician Resource Planning Committee in 1988. Newfoundland implemented a Health Human Resources Planning Committee. Saskatchewan established a Health Providers' Human Resource Committee in 1995. Ontario issued a Nursing Task Force Report and convened an Expert Panel on Health Professional Human Resources. Alberta's Provincial Health Workforce Steering Committee (1998) developed a comprehensive health workforce plan for all regulated health professions. Alberta has also developed a comprehensive Physician Resource Plan (1998) and implemented a number of physician related initiatives including the Rural Physician Action Plan.

Most jurisdictions have also put in place aggressive nursing training, recruitment and retention strategies. For example, PEI recently developed a comprehensive Nursing Recruitment and Retention Strategy, and Saskatchewan developed an advanced clinical nurses' training program. Northwest Territories is in its third year of implementing a recruitment/retention strategy to address critical shortages in the frontline professions of nursing, physicians and social work. Nunavut established a recruitment and retention strategy called Nunavut Illuarsaijiit Action Team and a nursing program affiliated with Dalhousie University. Jurisdictions have also established strategies for implementing alternative service provision such as Ontario's 1996 North Algoma Health Organization. Note: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario and Quebec have passed, or are in the process of passing, legislation to establish midwifery as a health profession. Northwest Territories has an advanced nursing education program with a nurse practitioner program to be offered in the fall of 2001.

ACUTE CARE

All provinces and territories have restructured their acute care service delivery to provide more accessible, more appropriate, and more efficient services. Some examples:

1990	Orientations ministérielles à l'égard de l'usage et de l'abus de psychotropes. (QC)
1990s	Provincial plan for delivery of acute care services: primary health in rural medical clinics, CHCs, hospitals within one hours drive; secondary health services at district hospitals and regional referral centres; tertiary health services in St. John's. (NFLD)
1992	Independent Laboratory Review Panel began the process of changing laboratory services in Saskatchewan. (SK)

1993	Amalgamation of over 400 health boards into 30 Health District Boards. Conversion of 51 small hospitals to community health centres. (SK)
1994/95	Operational Plan to integrate a more efficient and effective health system. (PEI)
1996	Ontario Health Services Restructuring Commission. (ON)
1996	"Action on Health to Ensure Access, Quality and Stability." (AB)
1997	Cancer Care Ontario. (ON)
1996	Plan d'action en toxicomanie: 1999-2001. (QC)
1998	Misericordia 24 Hour Urgent Care Centre. (MB)
1998	Funding Review Report (AB)
1999	Health Summit (AB)
2000	Five Point Plan to End Hallway Medicine. (MB)
2000	Surgical Waitlist Registry. (BC)
2000	Action Plan for Organ and Tissue Donation and Transplantation. (ON)
2000	Ten-Point Action Plan for Hospital Emergency Rooms–Greater Toronto Area. (ON)

CONTINUUM OF CARE

All provinces and territories have recognized the importance of enhancing community-based service delivery to bring services closer to home where people live and work as an alternative to institutional care. Some examples include:

- **Shift from In-hospital to Outpatient Care**. For example, a recent Manitoba study showed that reduction in hospital beds were more than offset by increases in out-patient care, resulting in actual increases in both quality and quantity of service delivery for a wide range of critical procedures. PEI established an early maternal discharge program. Ontario established Community Care Access Centres. Saskatchewan substantially increased rates of day surgery.

- **Home Care**. All provinces and territories have implemented comprehensive home care programs based on regional service delivery requirements. Home care has been one of the fastest growing programs in all jurisdictions. Jurisdictions such as Nunavut with high Aboriginal populations are developing specific Inuit and First Nations programs. (New Directions in Community Support (1992)).

- **Pharmacare**. All provinces and territories have implemented pharmacare programs aimed at providing affordable medically necessary pharmaceuticals to patients and clients. Closely linked innovations have included drug program information systems to achieve better tracking, more appropriate utilization and safer dispensing of pharmaceuticals. One province (BC) has implemented reference-based pricing. Alberta implemented a program for providing acute care drugs for people who are receiving care at home. New Brunswick

implemented a formulary management system. In 1995, Ontario implemented the Trillium Drug Program.

- **Long Term Care**. Most jurisdictions have dramatically increased the number of long-term care beds and the quality and quantity of personal care homes in order to meet growing needs. Several jurisdictions have established pilot and demonstration projects to improve long-term care delivery. For example, Newfoundland established a long-term care single entry model and standard assessment tool. New Brunswick established a comprehensive long-term care strategy in 1994. Ontario established a needs-based funding formula for long term care in 1998. Northwest Territories has implemented a single point of entry to continuing care services (including home care) for adults and children with the use of a standardized assessment and placement tool by home care coordinators. Alberta has also developed a single point of entry model. P.E.I. and Saskatchewan established a coordinated system entry. Saskatchewan is piloting a new assessment and classification system for long-term care residents. ("Healthy Aging: New Directions for Care" (1999); "Strategic Directions and Future Actions: Healthy Aging and Continuing Care in Alberta.")
- **Health Promotion/Population Health**. All provinces and territories have implemented strategies aimed at improving the health of the population, including Alberta's "Action for Health" (1996), and "Action for Health Final Evaluation Report" (March 2000). Most provinces and territories have implemented hard-hitting tobacco control legislation. Typical examples of other initiatives include Quebec's *Protéger la naissance, soutenir les parents: un engagement collectif* (1993), Ontario's offices of Child & Youth Health Policy, and Saskatchewan's Population Health Goals. Several provinces have implemented Aboriginal health and wellness strategies, including Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. Saskatchewan signed an MOU with the Meadow Lake Tribal Council regarding health reform. The three territories are jointly developing a wellness strategy.

PRIMARY CARE REFORM

All jurisdictions have implemented pilot projects and demonstration projects for primary care reform. For example, Northwest Territories is negotiating with Yellowknife physicians on alternative payment models. Yellowknife is the only community with physicians who are currently compensated on a fee-for-service basis. In 1998, Northwest Territories Registered Nurses Association and Medical Association co-developed a report on primary health care delivery. Some jurisdictions have implemented alternative service providers such as RNs and Nurse Practitioners to provide extended health services (e.g., Alberta). Newfoundland has implemented an innovative model for multidisciplinary education (the Primary Health Enhancement Project). British Columbia has implemented demonstration projects. Manitoba has established community nurse resource centers and Aboriginal health centers. Saskatchewan has established 13 primary care sites and additional sites are being developed. Ontario has implemented seven major pilot projects and has recently signed a new Physician Agreement that will change the way that primary care is delivered, allowing for 24-hour access to primary health care services and new services such as telephone advice and triage. In 1999, Alberta has implemented 26 primary health care pilot projects and 6 alternative payment plan pilots.

Other Innovations

A wide range of other innovations has provided examples of means to achieve improvements in appropriate, efficient and effective service delivery. For example:

- Development of a Western Pediatric Cardiac Surgery Initiative aimed at integrating pediatric cardiac services to all Western jurisdictions
- Aboriginal health strategies such as the Aboriginal Healing and Wellness Strategy in Ontario, and First Nations Health Program (AB, MB, SK, ON, YK)
- Strategies for parental home nutrition (AB)
- Telemedicine (diagnostic imaging service programs in Newfoundland, Alberta, Saskatchewan Manitoba, and Ontario); Tele-radiology, Tele-care (NB); Telehealth Network (NWT, Nunavut)
- "First Responder" training program for community volunteers to provide pre-ambulance emergency services (SK)
- Surgical waiting list registry (BC)
- Extra Mural Program—an active treatment in-home care program that provides comprehensive health care services through various service providers (NB)
- Diabetes networks and other diabetes education, prevention and research initiatives, e.g., Diabetes Status Index in Ontario (ON, MB, SK)
- First Inuit Health Policy Forum, February 1995.
- Suicide Prevention training, 1999 (NWT)
- Child Action Plan (SK)
- Mental Health, Suicide Prevention, Nunavut (2000)
- Ontario has announced a major Stroke Strategy in the 2000 Budget
- Alberta We*ll*net is an umbrella for building an integrated health information network in Alberta

Evidence-Based Decision-Making

All provinces and territories enhanced the mechanisms they used for improving accountability by service deliverers and for developing data-based decision-making mechanisms. Examples include:

- Data-based health services research centers such as the Manitoba Centre for Health Policy and Evaluation, the Newfoundland and Labrador Centre for Health Information, Nova Scotia Research Foundation, Institute of Clinical Evaluative Sciences and the Centre for Health Economics and Policy Analysis in Ontario, the Health Services Utilization and Research Commission in Saskatchewan, the Centre for Health Services and Policy Research in British Columbia, etc..
- Accountability frameworks such as Alberta, Ontario, Saskatchewan, New Brunswick, NWT, and Manitoba business planning requirements, and Alberta's population-based funding formula.

- Starting Points: "Recommendations for Creating a More Accountable and Affordable Health System" (1993-AB).
- "Achieving Accountability in Alberta's Health System" (1998)
- Patients' Bill of Rights and Hospital Report Cards being implemented in Ontario.
- Northwest Territories has recently released the "NWT Health Status Report" (1999), which profiles health and social indicators for the NWT population. Northwest Territories will be preparing two other regular reports: one that profiles health services utilization (2000) and another that features selected health/social topics (2001). These reports, to be updated every three years, provide an important base for program and service planning and decision-making.

Overall, the broad range of measures and initiatives introduced by provinces and territories demonstrate the commitment to "maintain, protect and enhance the health status" of their respective citizens. Provinces and Territories are committed to the development and continuance of a health system responsive to population health needs within the fiscal resources available to the provinces/territories.

Section 6: Cost Drivers, Cost Accelerators and Cost of Reform

In this section scenarios for future health spending in Canada are presented.

The current provincial/territorial funded health care system has been modeled to show the potential future Canada-wide impacts of basic cost drivers such as population growth, aging, inflation and other factors. These factors alone could increase cost pressures by an average of almost five per cent per year over the next 27 years—for a total increase of almost 250 per cent by 2026.

A number of other factors suggest that the base scenario of operating spending may be underestimated, and that the growth rate could exceed that projected based on the above cost drivers. A number of "cost accelerators"—that can be expected to increase spending pressure well above those cost drivers that can be precisely estimated—are discussed. These factors are not necessarily quantifiable on a system-wide basis. These could include factors such as new technologies, increased expectations, information technologies, labour costs, and many others.

System change and reform is the third component that greatly impacts the future cost of the health system. This includes the variety of structural change, including method of service delivery, scope of programs and services, effective roles of providers, information systems, and new management structures to ensure continuous innovation in Canada's health system.

I. Overview of Base Cost Driver Scenario Assumptions, Data and Methods

Assumptions, Data and Methods

The base scenario takes existing health care services, as funded by the provincial and territorial governments, and projects them to the year 2026 based on the effects of population growth, aging, inflation and a modest factor of one per cent per year to reflect "other" health care service needs.

The spending base is the 1999 CIHI forecast of provincial/territorial operating spending on six program areas—hospitals, other institutions, physicians, other professionals, drugs, and other programs. In effect, the base scenario assumption is that the current levels of provincial/ territorial spending are both appropriate—in that they represent an appropriate bundle of services—and that the bundle of services is fully funded.

A number of factors suggest that the base level of operating spending may be low.

- To the extent that the CIHI forecast underestimated actual 1999 spending, as it did for several jurisdictions, the scenario levels will also be underestimated.
- If transfer payment agencies ran deficits, which may become part of the provincial/ territorial responsibility at some future date, spending levels and growth rates are also underestimated.
- There are emerging reforms, such as in expansion of long-term care facilities and community services, which will continue for several years, that suggest the base scenario growth rates will be understated as well.
- Current utilization will not fully reflect demand and understate future changes in programs to meet changing expectations.

The scenarios are based on Statistics Canada's population projections for each jurisdiction, out to 2026, and on an assumed inflation rate of two per cent per year, and an "other" growth rate of one per cent per year to accommodate unexpected health care needs.

Per capita spending for each program area in each jurisdiction is increased to reflect inflation and "other" assumptions. These, applied to the population projections and summed, produce scenarios that take into account all four factors—population growth, aging, inflation and other.

Implicit in this methodology are two key assumptions about the future consumption and costs of services. Part IV of this paper considers these assumptions in some detail, and concludes that they likely underestimate growth pressure ahead.

- It is assumed that individuals within a given age group will, in future, consume a similar (or one per cent greater per year) bundle of services to those that age group consumes today. Both the number and type of services would remain relatively static.
- It is assumed that two per cent is a reasonable assumption, over the long run, for inflation in both the prices of health care goods and in the remuneration of health care providers (this last cost represents about 75 per cent of health operating spending).

FUTURE PROVINCIAL OPERATING HEALTH EXPENDITURE TRENDS – BASE COST DRIVER SCENARIOS

Level of Base Operating Expenditures

Operating health expenditures for Canada are currently close to $54 billion. Base forecast suggest that within five years, base expenditures could exceed $67 billion, within 10 years they could amount to almost $85 billion. By 2026/27, the end of the outlook period, they could reach $186 billion, more than $132 billion higher than in 1999/00. (It is important to note that adding the effects of cost accelerators to the base scenario would push these figures even higher.) Figure 16 below shows the level of base operating expenditures at the Canada level for each year of the outlook period. A table showing average annual growth rates in base operating expenditures for Provinces/Territories is presented in Appendix B.

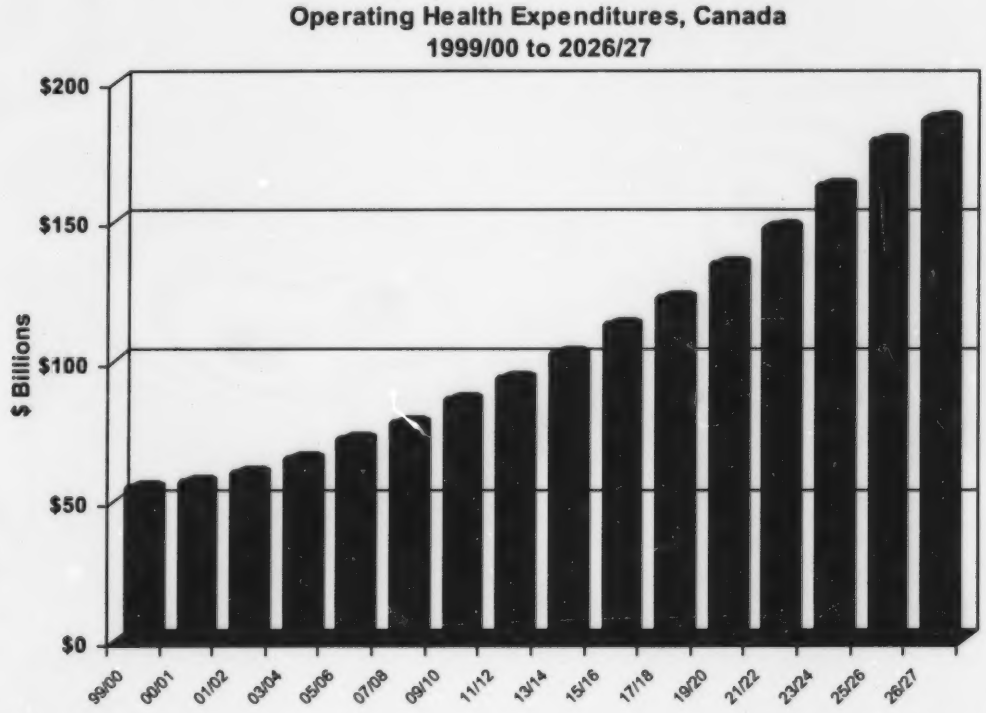


Figure 16

Growth in Operating Health Expenditures, 1999/00 to 2026/27

On an annual basis, the base scenario suggests that health spending could increase by close to five per cent per year during each of the next 27 years. Although, there is some variation in the annual growth rates over time, the variation is small with annual growth rates ranging between a low of 4.6 per cent and a high of 4.9 per cent per year.

Growth rates vary somewhat across Canada. For example, in 2000/01, the highest growth rates are found in Nunavut (7.4 per cent) and Alberta (5.8 per cent) and the lowest in Yukon (2.3 per cent) and P.E.I. (3.3 per cent).

The cumulative impact of these annual growth rates could be quite substantial. During the next five years (1999/00 to 2004/05) operating health expenditures at the Canada level could increase by a total of about 25 per cent, and in the next ten years (1999/00 and 2009/10) they could grow by a total of 58 per cent. By 2026/27, health expenditures are projected to be 247 per cent higher than in 1999/00.

Growth in health expenditures during this period will outstrip population growth by a substantial margin. During the next five years (1999 to 2004), Canada's population is projected to grow by a total of about four per cent. During the next ten years (1999 to 2009), the population is projected to grow by less than eight per cent. In fact, over the entire 1999 to 2026 period, the population is expected to grow by under 19 per cent.

Base Operating Health Expenditures as a Share of GDP, 1999/00 to 2026/27

The base scenario gives rise to health operating expenditures that remain fairly consistent as a share of GDP over the period, based on consensus forecast of nominal GDP over the period. Beginning at an estimated 5.7 per cent for 1999, it declines to 5.5 per cent between 2001 and 2006, and then rises to 5.9 per cent by 2026.

This is not surprising, given that scenario growth rates range between 4.6 per cent and 4.9 per cent per year. Consensus forecasts suggest nominal GDP growth rates will moderate from 6.5 per cent for 2000 to 4.8 per cent for 2002, and more slowly thereafter to 4.0 per cent in 2026.

Again, it should be noted that this scenario might under-represent the true pressures facing the health care system.

Per Capita Base Expenditures

On a per capita basis, health operating expenditures in Canada currently stand at about $1,759. With the population projected to grow at a slower rate than health expenditures, not surprisingly, per capita base health costs are expected to increase throughout the outlook period. As shown in the table below, per capita base health costs could exceed $5,000 by the end of the outlook period in 2026/27.

Health Costs, Canada 1999/00 to 2026/27

Table 1

Year	$ Per Capita	Increase Over Five Years ($)
1999/00	1,759	
2004/05	2,121	362
2009/10	2,571	450
2014/15	3,135	564
2019/20	3,831	696
2024/25	4,726	895
2026/27	5,143	-

Decomposition of Base Expenditure Growth

As discussed above, spending could rise by close to five per cent per year. In 2000/01, expenditures could increase by 4.7 per cent per year, or by $2,550 million. Of this growth, about 0.9 per cent (~ $473 million) would be attributable to population growth, about 0.8 per cent to population aging (~ $438 million), about 2 per cent to CPI increases (~ $1,092 million), and 1.0 per cent is assumed to result from other factors (~ $548 million).

Over time, as population growth slows and the aged component of the population rises, the relative contributions of these factors change. Thus, between 2025/26 and 2026/27, expenditures could grow by 4.7 per cent, or by $8,435 million. Of this growth, about 0.4 per cent (~ $735 million) would be attributable to population growth, about 1.3 per cent to population aging (~ $2,311 million), about 2 per cent to CPI increases (~ $3,613 million), and 1.0 per cent to other factors (~ $1,775 million).

The impact of population growth and aging on the expenditure scenarios varies across jurisdictions. In 2026/27, the jurisdictions that would experience the greatest pressure from population growth would be Nunavut (1.3 per cent), British Columbia (1.0 per cent), Northwest Territories (0.9 per cent), Ontario (0.7 per cent) and Yukon (0.6 per cent). In a number of jurisdictions, population growth will actually exert a negative pressure on expenditures. Foremost among these jurisdictions is Newfoundland where the pressure from population growth could amount to -0.8 per cent in 2026/27.

By 2026/27, the annual impact of population aging will be felt most in Yukon (2.0 per cent), New Brunswick (1.6 per cent), Newfoundland (1.6 per cent) and Nunavut (1.6 per cent). Aging will exert least pressure on costs in Ontario where it will add 1.1 per cent to expenditures.

Figure 17 graphically depicts the contribution of each of cost driver—population growth, aging, inflation and other—to expenditure growth over the outlook period and Table 2 shows the contribution of each factor to average expenditure growth over five year time periods.

Canada – Health Operating Expenditure Base Scenarios

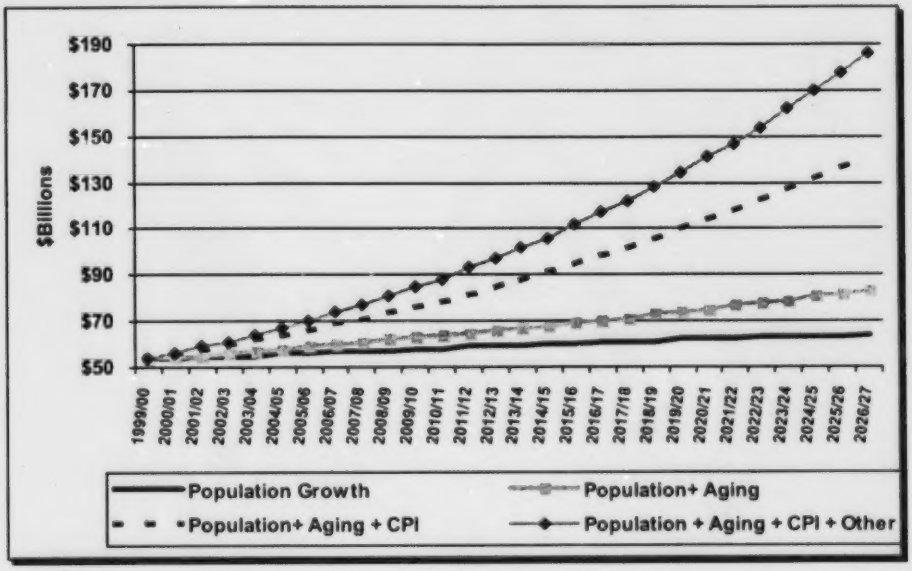


Figure 17

Decomposition of Average Annual Growth (over five years) in Base Operating Expenditures, Canada, 1999/00 to 2026/27 (Per Cent)

Table 2

	1999/00 to 2004/05	2004/05 to 2009/10	2009/10 to 2014/15	2014/15 to 2019/20	2019/20 to 2024/25	2024/25 to 2026/27	1999/00 to 2026/27
Total Expenditure Growth	4.6	4.7	4.7	4.7	4.8	4.8	4.7
Expenditure Growth due to Population Growth	0.81	0.71	0.65	0.59	0.50	0.42	0.63
Expenditure Growth due to Aging	0.76	0.88	1.00	1.04	1.24	1.28	1.01
Expenditure Growth due to CPI	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Expenditure Growth due to Other Factors	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Note: Figures shown for 2024/25 to 2026/27 represent average annual growth over two years and figures shown for 1999/00 to 2026/27 represent average annual growth over 27 years.

Expenditure Trends by Age Group

Currently, seniors aged 65+ comprise about 12.5 per cent of the population and consume 45 per cent—$25 billion—of health expenditures. The "near seniors" population (aged 45-64) consumes an additional 21 per cent of health care resources. By 2026/27, when seniors comprise about 21 per cent of the population, about 60 per cent of health spending could be devoted to caring for this age group.

Share of Operating Health Spending by Age Group, Canada (Per Cent)

Table 3

	1999/00	2004/05	2009/10	2014/15	2019/20	2024/25	2026/27
0 –14	7.4	6.5	5.8	5.3	5.0	4.6	4.5
15 - 44	26.4	24.4	22.3	20.6	18.9	17.3	16.6
45 - 64	20.9	22.8	24.2	23.5	21.9	19.8	19.0
65 +	45.3	46.3	47.7	50.6	54.2	58.3	59.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

As shown in Figure 18 below, analysis of per capita costs by age group illuminates how health spending increases with advancing age, and also how per capita cost for each age group could rise over time.

Per Capita Costs by Age Group
Canada 1999/00 to 2026/27

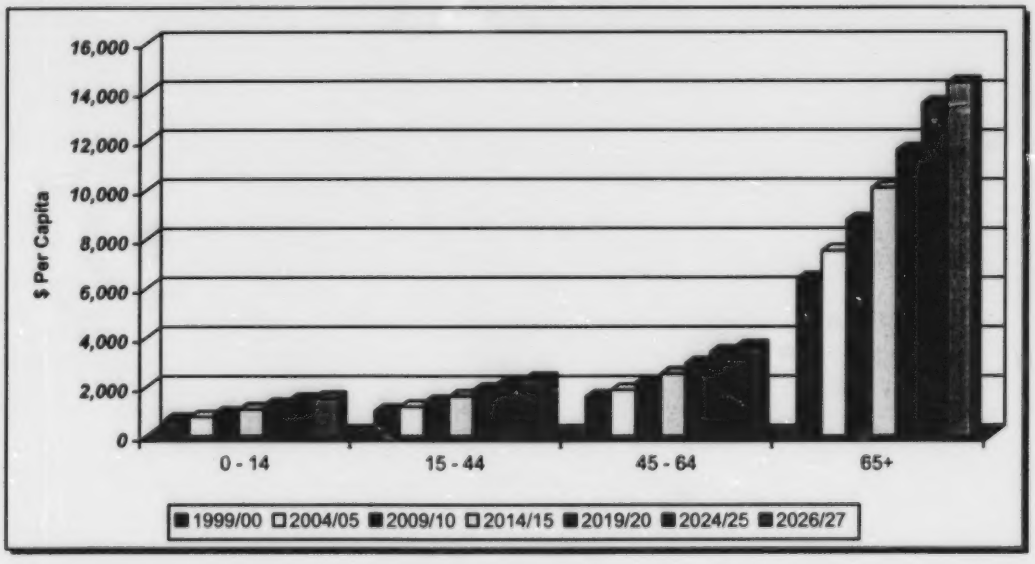


Figure 18

Expenditures by Program Area

Hospitals are the largest single health care item in Canada. In 1999/00, Provincial/Territorial expenditures on this sector amounted to over $24 billion. By 2026/27, spending on hospitals could rise to $86 billion, about three and a half times the spending level in 1999/00. Over this period, the share of expenditures allocated to this sector could rise slightly, from 45 per cent to 46 per cent.

Although physicians are the second largest provincial/territorial health expenditure item, at $12 billion, spending on this category is about half the level of spending on hospitals. By 2026/27, spending on physicians could amount to $36 billion, about triple the level in 1999/00. The share of expenditures on physicians will drop over time, from 22 per cent in 1999/00 to 19 per cent in 2026/27. This is a consequence of physician utilization being less sensitive to age structure than the utilization of hospitals.

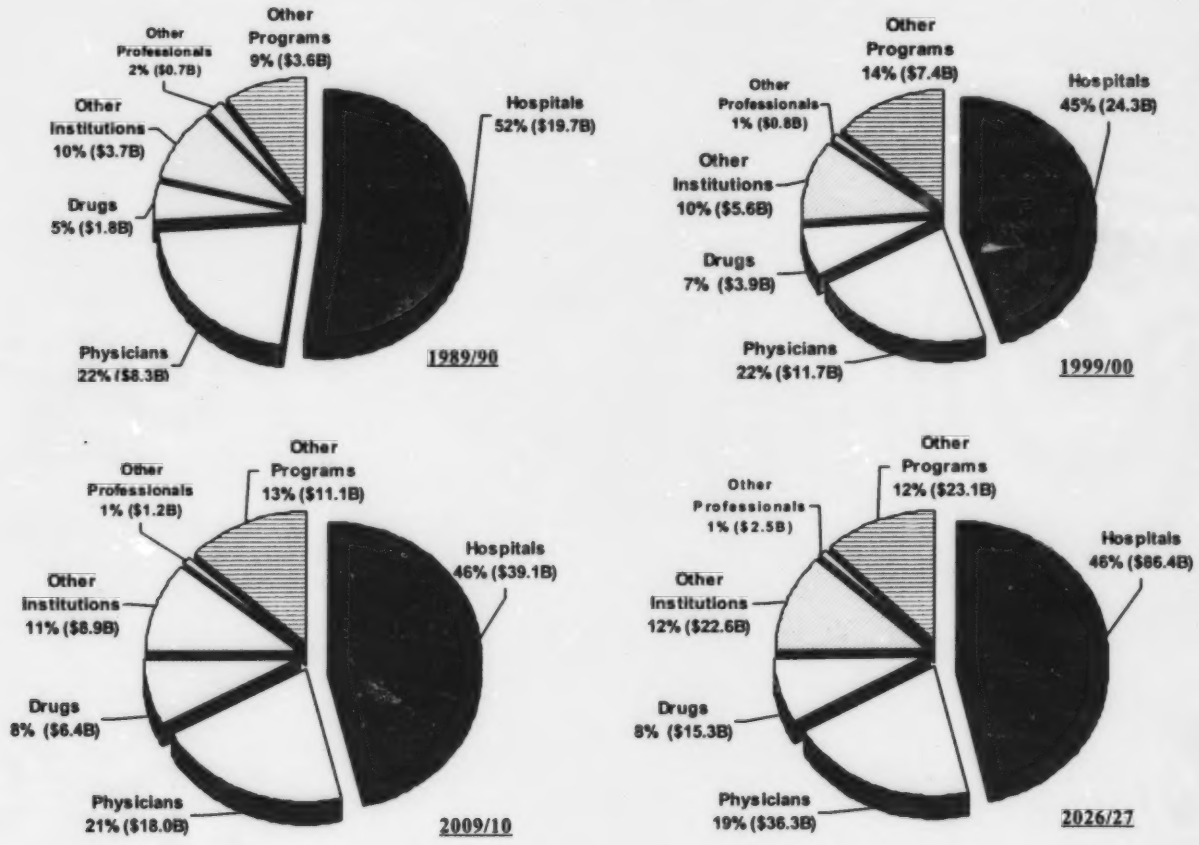
Expenditures on other institutions currently stand at almost $6 billion, they could almost quadruple by 2026/27 to reach $23 billion by 2026/27. The share of spending on these types of institutions could rise from about 10 per cent today to 12 per cent by 2026.

Drug expenditures will also experience substantial growth over the outlook period. They could rise from $4 billion today to over $15 billion by 2026/27, almost a fourfold increase. Between 1999/00 and 2026/27, the share of expenditures on drugs could rise from seven per cent to eight per cent.

Expenditures on other programs and on other practitioners would also rise under the spending scenarios presented here.

Figure 19 below shows the actual and the relative health expenditures by program area for four points in time. Table 4 shows the average annual growth rates over five years for each of the program areas.

Provincial/Territorial Health Expenditures by Program Area 1989/90 to 2026/27



Note: Figures may not add due to rounding.

Figure 19

Average Annual Growth Rate in Operating Expenditures by Program Areas, Canada 1999/00 to 2026/27 (Per Cent)

Table 4

	1999/00 to 2004/05	2004/05 to 2009/10	2009/10 to 2014/15	2014/15 to 2019/20	2019/20 to 2024/25	2024/25 to 2026/27	1999/00 to 2026/27
Hospitals	4.9	4.8	4.7	4.7	4.9	4.9	4.8
Physicians	4.4	4.4	4.3	4.2	4.2	4.1	4.3
Drugs	4.9	5.0	5.2	5.3	5.4	5.3	5.2
Other Institutions	4.6	4.9	5.5	5.6	5.7	5.6	5.3
Other Professionals	4.5	4.4	4.5	4.5	4.5	4.4	4.4
Other Programs	4.2	4.1	4.4	4.4	4.4	4.4	4.3

II. Cost Accelerators

The Base Cost Driver Scenario is based on application of current (1997/98) health service utilization patterns to projected populations. However, health service utilization rates in 1997/98 may under-represent the future use, and thus the future cost drivers of the health system, because:

- Demand for care may exceed current supply, such that current utilization can't be considered to be fully reflective of demand
- New clinical research is identifying populations that can benefit from increased access to existing health technologies
- Emerging and new technologies and treatments may allow us to treat conditions that were previously untreatable
- The scope of current programs may be changed to meet changing demands and expectations

As a result, responding to the health service needs of the population in the future may be significantly more costly than would be estimated from past patterns of health service needs. This section introduces a number of potential utilization and cost accelerators that can be expected to increase spending well above the types of cost drivers that can be modeled from historical experience and rates of use.

All provinces and territories have worked in partnership with health providers to identify efficiencies and productivity improvements. However, in the near term, productivity gains will be limited due to the large amount of efficiencies already realized in the hospital sector. Other gains will be realized and may offset some of the accelerator impact discussed below.

Age Composition of Population: Implications for Long-Term Care

Within the Base Cost Driver Scenario, only predictions of the future use of hospitals, physicians and drugs are based on segmentation of use-rates by age cohort for the population over 65. All

of the other program areas rely on a single blended population over 65 estimate to drive projections of use and cost. Because there are significant differences in the use of health services as people age beyond 65, utilization rates based on a blended population may seriously underestimate the future use and cost of health services.

The most dramatic impact of aging beyond age 65 is on the use of institutional long-term care. This can be seen in the accompanying graph (figure 20) showing the differences in use-rates (in Ontario) by gender for each major age group over 65. As can be seen, the group over 85 uses dramatically more residential long-term care than either the 65 to 74, or 75 to 84 groups. According to census data, over the next decade, the number of people over age 85 will grow by 61 per cent, as compared to 21 per cent for the population age 65+.

Differences in Use-Rates in Ontario by Gender (over 65)

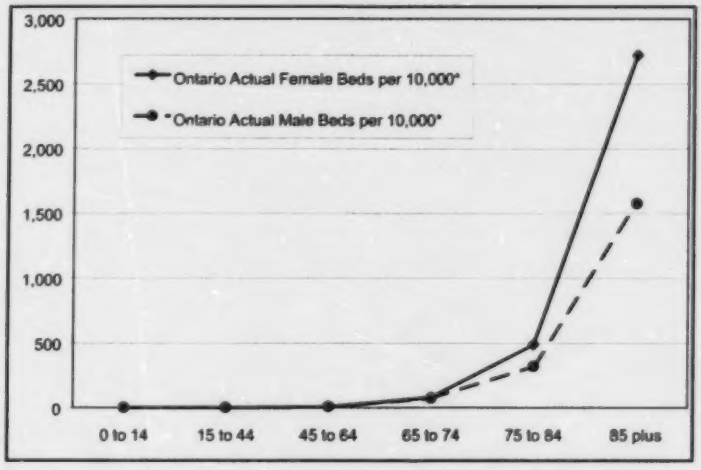


Figure 20

Because the 85+ population is growing faster than the blended population over 65, the health spending model may under-represent the impact of population aging on use of 'Other Institutions' (which are mostly nursing homes and homes for the aged) by as much as 50 per cent. Using a use-rate based on a blended population over 65, it would be estimated that the requirement for beds would increase by only 22 per cent from 1999 to 2009. However, if a projection based on the use-rates of each segment of the population over 65 is used, the increase in required beds is estimated to be almost twice as high at 43 per cent. This difference is portrayed in the graph following[26].

Difference in Projections of Need for LTC Beds

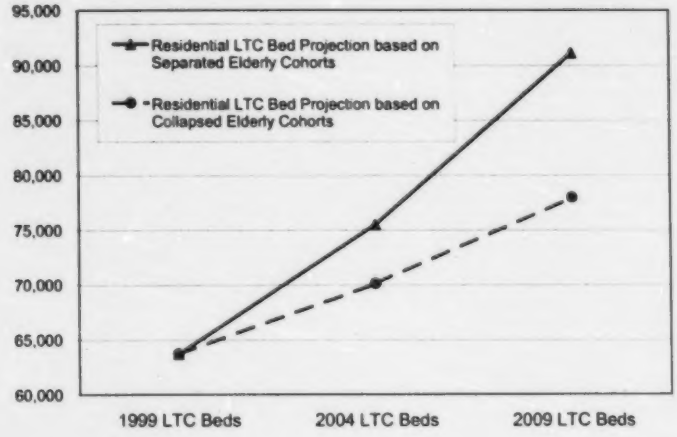


Figure 21

Not only is the spending model underestimating the number of people that will need long-term care in the future, it also underestimates the cost of caring for these people. Long-term care facility residents are increasingly older and are therefore likely to have greater care requirements than in the past. Also, acuity levels have increased as a result of hospitals discharging patients back to long-term care facilities earlier and because a growing number of hospital procedures and treatments are being provided for long-term care facility residents on an outpatient basis.

Similarly, because it is forced to employ use-rates based on a blended population over 65, the spending model also underestimates the cost of in-home long-term care. There is a potentially large need/demand for long-term in-home care services. The Berger Population Health Monitor reports that 10 per cent of Canadians indicate that they have long-term physical or mental disability requiring long-term in-home care. And those that receive home care indicate that the amount that they receive is inadequate. If eligibility for in-home care is expanded, the growth can be expected to accelerate even more based on this self-assessment of need.

[26] These estimates are based on the actual use rate of long-term care beds in Ontario by gender and age drawn from the Ontario Ministry of Health Bed Inventory, March 1996 as reported in "Rebuilding Ontario's Health System: Interim Planning Guidelines and Implementation Strategies", Health Services Restructuring Commission, Toronto, July 1997.

Emerging and New Technologies

Emerging and new technologies are likely to accelerate increases in the costs of health services beyond any predictions of future costs that are based on current approaches to care and technology. The dissemination and rate of use of emerging, very high cost, publicly funded technologies and treatments are likely to increase dramatically. Reasons for the increase include demonstrated efficacy and more acceptance in the field, greater availability of technologies, expanded provider capability, and increasing consumer demand. All of this leads to a sense of urgency among providers to gain access to and use these new, proven, demonstrably effective treatments and technologies for their patients.

Examples of the increase in the rate of use of important new and emerging technologies and techniques beyond what would be predicted by growth or aging in the population over the past five years are presented in the following table. As can be seen estimates based on Ontario use rates in 1994/95 would have underestimated the actual use in 1998/99 by as much as 100 per cent.

Table 5

Reason for Hospitalization	Age/Gender Standardized Ontario Hospitalization Rate per 1,000 Population					% Increase in Excess of Change in Population Size and Age
	1994/95	1995/96	1996/97	1997/98	1998/99	
Cardiac Catheterizations	1.88	2.02	2.19	2.38	2.59	37.9%
Coronary Bypass Surgery	0.55	0.56	0.61	0.67	0.65	18.0%
PTCA (Angioplasty)	0.42	0.43	0.48	0.54	0.63	51.0%
Unstable Angina	0.80	0.97	1.29	1.54	1.70	112.4%
Hip Replacement	0.58	0.58	0.58	0.61	0.62	7.9%
Knee Replacement	0.56	0.63	0.65	0.70	0.73	29.9%
Bone Marrow Transplant	0.03	0.03	0.04	0.05	0.04	55.6%

The efficacy of treatments and the dispersion of technique and technology have accelerated, and will continue to accelerate, the use of these and other important interventions. As a result, we can expect that the growth in the use of these and other technologies will continue to exceed what would be predicted simply by growth or aging of the population.

The following paragraphs describe some of the key accelerators of cost and their marginal impact on the health system beyond those reflected in current (97/98) utilization rates and costs.

Cardiac Care - Heart disease is a chronic lifelong disease that can be treated to relieve symptoms, improve quality of life and reduce early death.[27] Current use rates do not fully reflect the increasing dissemination and use of new technologies and techniques to ameliorate the affect or to treat acute episodes of the disease. Previously restricted to academic health science centres (AHSC), cardiac revascularization services are now spreading to large community hospitals. With an increase in the number of catheterization laboratories there will be increases in the number of diagnostic catheterizations and a consequent increase in the identification of morbidity requiring interventions.

The graph shows the estimated increase in costs in Ontario beyond what would have been predicted based on the use-rate in 1995 for cardiac catheterization. The increase in the use rate for these and other cardiac interventions can be expected to continue and perhaps accelerate in the future.

Comparison of Projected Ontario Hospital Service Costs (based on 1994/95 Utilization Rates) with Actual Ontario Hospital Service Costs—Admissions with Cardiac Catheterization

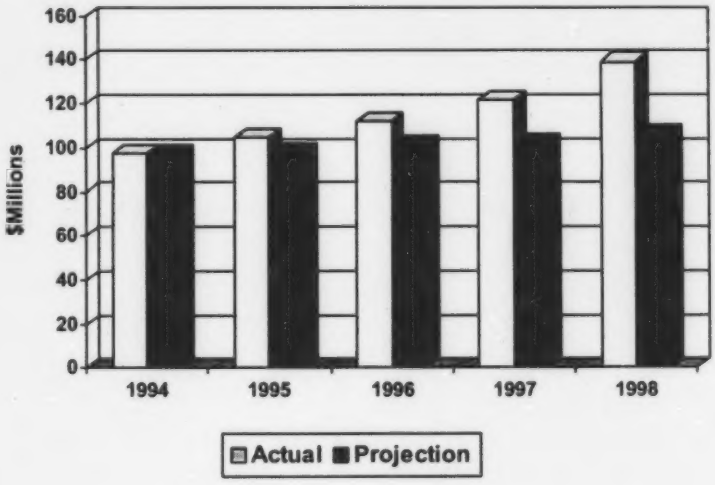


Figure 22

The increased use and cost of these procedures and the technology to support them is not reflected in past use and cost statistics and thus is not reflected in the health spending model. If disseminated widely, there will be a significant increase in capital expenditures to support the technology (that may, or may not, be offset by reductions in the cost of treatment).

Stroke Therapies - Stroke is an enormous public health problem. Stroke accounts for approximately 750,000, or 3.5 per cent, of all hospital patient days in Canada. During the immediate past decade, there has been a considerable deceleration in the decline in stroke mortality rates. If the rate of decline in stroke mortality rates is maintained there will be a

[27] Heart and Stroke Foundation of Canada, The Changing Face of Heart Disease and Stroke in Canada, 2000, *Heart and Stroke Foundation of Canada*, 1999.

continuing increase in the number of dependent stroke survivors. Current predictions of utilization and cost are based on current patterns rather than this changing mortality rate and therefore costs for treatment of stroke are likely under-estimated. Most stroke patients are over the age of 75 years old, and an extended life-span with longer rehabilitation will greatly increase health care costs.

There are three major emerging techniques for the effective primary prevention of stroke among people at particularly high risk: carotid endarterectomy, percutaneous transluminal angioplasty (PTA), and thrombolytic therapy for stroke. Each of these clinical techniques has proven efficacy, high cost, and low rates of application (compared to the U.S.) in Canada. However, until now, patients over 80 years have been excluded from most clinical trials. As these technologies are made available to the very elderly the use and costs will be significantly more than suggested by the current utilization.

Major Joint Surgery - Osteoarthritis is a common, chronic, and degenerative disease of the joints. It is the most prevalent chronic condition among women. Although osteoarthritis is not preventable, the pain and disability that result from severe disease can be reduced dramatically through the surgical implantation of artificial joints. During the past two decades, the use of total joint arthroplasty for hips and knees has increased substantially, far in excess of what would be projected purely on the basis of aging and population change.

However, there is mounting evidence of disparities in the use of total hip and total knee arthroplasty between men and women.[28] The findings of a recent Canadian study concluded that there is under-use of total arthroplasty for severe arthritis for both sexes, but the degree of under-use is more than three times as great in women as in men.[29] As women are provided with this procedure in keeping with their need, it is likely that the use and cost will accelerate even faster. New technologies, earlier interventions and more application to women will significantly increase the cost of this intervention over that predicted from current rates of use and cost.

Organ Transplantation – Transplants, once available in only the most advanced AHSCs, are now being done in many more centres.[30] Total transplant activity in Canada continues to increase. Over the past decade, there has been a 44 per cent increase in transplants[31]. However, in 1997, there were only 1,566 single organ transplants performed in Canada. In 1997 there were 436 cadaveric organ donors in Canada, representing only a three per cent increase from 1996. The Canadian organ donation rate is low and has remained relatively static for the past five years. However, as new programs raise donor awareness (e.g., in Ontario) growth in the number of donors will increase the number of transplants. Modest increases in the rate of transplants can have a dramatic impact on rising costs.

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[28] Charlson, ME and Allegrante, JP. "Disparities in the use of Total Joint Arthroplasty." *The New England Journal of Medicine*, April 6, 2000;342(14):1044-45

[29] Hawker, G. et al. "Differences between Men and Women in the Rate of Use of Hip and Knee Arthroplasty." *The New England Journal of Medicine*, April 6, 2000;342(14):1016-1022

[30] Weil, TP. "Comparisons of Medical Technology in Canadian, German, and US Hospitals." *Hospital and Health Services Administration*, Winter, 1995;(40)4:524-533.

[31] *Canadian Organ Retrieval Registry*, November, 1999.

Dialysis has enabled patients with end-stage renal failure to survive for years, in many cases with great improvement in quality of life. There is increasing need and demand for dialysis in Canada. The incidence and prevalence of end-stage renal disease (ESRD) have increased greatly in Canada over the last two decades. CIHI has reported that the prevalence rate for all patients on dialysis in Canada jumped 200 per cent between 1981 and 1997 when the rate stood at 399.2 per million population. This was an increase of 13.9 per cent over 1996.[32] The increase in incidence of end stage renal disease (ESRD) is much greater for the elderly than for younger age groups. Between 1981 and 1997 the relative increase in ESRD incidence (per million population) was 244 per cent for those aged 65 to 74 and 468 per cent among those aged 75 and above. Canadians aged 45 to 64 experienced a 71 per cent relative increase during that same period (CIHI).

The projected increase in dialysis services is greater than that explained by population aging alone. Recent planning exercises in British Columbia have estimated an increase in need for community-based hemodialysis services of 16 per cent per year, or an 840 per cent increase to 2015. The projected increases are plausible when one considers that the incidence of ESRD per million population in the United States and other countries far exceeds that in Canada. The literature predicts a continued and increasing shortfall in resources to accommodate the expected increase in ESRD prevalence.[33] (It is important to note that the alternative to dialysis for most patients is death.)

Magnetic Resonance Imaging (MRI) is now the definitive diagnostic tool for a widening array of diseases and conditions such as oncology diagnosis and treatment management, musculoskeletal conditions (joints, degenerative spinal conditions), and neurological conditions (e.g., MS).

It is also an emerging diagnostic tool for cardiac, female pelvic, ENT and liver diseases and conditions. Also, MRI is becoming important in therapeutic interventions. Most importantly, there is increasing use of Intraoperative MRI and MR Angiography. However, the capital cost and operating cost of this technology is very high. Ontario currently provides an operating grant of $800,000 per system to support operation.

Canada has the lowest dissemination of MRI of any country for which there are reliable statistics available (Rankin, 1999)[34]. Increasingly informed consumers are becoming distressed by the difficulty in accessing MRI. Clinicians are concerned by the lack of access to a demonstrably effective diagnostic and treatment tool. This demand will lead to increased dissemination and use of MRI technology in the near future.

The expected dissemination of MRI in the first decade of the 21st century can be likened to the dissemination of CAT technology in the last two decades of the 20th century. As of January 1998, there were 245 operational CAT units in Canada. If there is similar distribution of MRI

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[32] Choudhry NK; Naylor, CD "Reflections on supply-demand mismatch in dialysis services in Ontario." *Canadian Medical Association Journal* 1995; 153: 575-581

[33] Schaubel DE, Morrison HI, Desmeules M, Parsons DA, Fenton SSA. "End-stage renal disease in Canada: prevalence projections to 2005." *CMAJ* 1999;160:1557-63

[34] As of December 1997, there were 53 MRI units installed, with an additional 6 units to be installed in 1998 (Canadian Coordinating Office for Health Technology Assessment).

over the next decade, then the cost of hospital operations will increase by approximately $150 million per year beyond what would be predicted based on the current distribution and use of MRIs.

Proton Emission Tomography (PET) is a non-invasive diagnostic imaging technique that uses radionuclides to produce cross-sectional images. The value lies in its ability to show metabolic activity. It was originally used mainly for the investigation of brain function; however, uses have expanded to include imaging of the cardiovascular system and other organs such as the pancreas. As of April 1998, there were only seven scanners in operation in Canada.[35] High capital and operating costs of a PET centre have delayed widespread clinical implementation and have limited access for routine clinical care. However, recent advances in the technology have reduced the acquisition cost. As the usefulness of the technology in diagnoses and treatment is demonstrated, demand for access will likely increase. Its patterns of dissemination will likely follow that of CAT and MRI.

Genetic Testing & Therapy - Gene therapy involves the use of genes and the techniques of genetic engineering in the treatment of a genetic disorder or chronic disease. Gene therapy represents a special development in medical research because of its potential to alleviate or perhaps even cure diseases for which no adequate treatment now exists. Biotechnology companies are racing ahead with commercialization by designing diagnostic tests to detect errant genes in people suspected of having particular diseases or of being at risk for developing them. Gene tests (also called DNA-based tests) involve direct examination of the DNA molecule itself. An already extensive list of currently available gene tests (provided by the Human Genome Project in the U.S.) is being added to each month. One area (but not the only area) of debate surrounding gene therapy is the potential for in-utero procedures and treatments.

The pressure to provide more access to genetic testing will lead to an investment in the infrastructure to support gene tests and ultimately, treatments. It is likely that there will be pressure to expand the number of organizations that can provide testing (at a minimum) and potential treatments. Gene therapy will also place pressure on drug costs as pharmaceutical companies race ahead with the development of new drugs to address genetic disorders.

Increasing Use of More Effective Pharmaceuticals

In publicly funded programs the cost of drugs is growing dramatically beyond what would be predicted by population growth or aging. In Ontario between 1992 and 1998, the annual cost per claimant increased by 67 per cent from $390 to $653[36]. Factors that influenced this increase include the aging of the claimant population (from an average age of 54 to 57 years), development of new and replacement drug therapies and shift from hospital to community care. These trends can be expected to continue and suggest that forecasts of drug expenditures from historical rates will significantly underestimate actual use. Application of a cost prediction model based on inflation, aging, and population growth, would have under-estimated the actual double-digit increases in drug expenditures in the 1990s.

[35] Canadian Coordinating Office for Health Technology Assessment (CCOHTA)
[36] The Delta Report, Brogan Inc and Glaxo Wellcome, Toronto, 2000.

While the future impact of new drug therapies is difficult to quantify, the evidence suggests that the introduction of new drugs will accelerate. Breakthroughs in gene therapy (see related section), advances in anti-viral therapies, and new developments surrounding cancer care are all examples of areas where pharmaceutical interventions will likely be available.

Also, due to an ever more competitive marketplace, pharmaceutical manufacturers have adopted direct to consumer (DTC) drug advertising to stimulate consumer demand. By informing a consumer of choices and options for an ailment, the pharmaceutical industry is equipping patients with a knowledge base to approach physicians and increase demand for a drug. For example, in a recent survey,[37] 56 per cent of respondents reported having read a DTC advertisement carefully and completely, 35 per cent said that they had asked their doctor for more information because of the ad, while 19 per cent reported that they asked the physician for the advertised drug. DTC advertising has the potential to increase the costs of care beyond only the cost of the drugs. For example, IMS Health reported that one year after a DTC campaign for Fosamax, physician visits for osteoporosis evaluation nearly doubled.

New Diseases

New or increasingly prevalent diseases may significantly impact use of all parts of health system.

The **HIV/AIDS** pandemic continues to sweep across continents. North America has seen the HIV epidemic slow in recent years as new infections start to level off. However, immigration from affected areas of the world may re-ignite the explosive growth in infections. HIV infection has been one of the major causes of death for individuals between the ages of 25 and 44. Among men in this age group, it was the leading cause of death in the U.S. and the second leading cause of death in Canada in 1994. In the same year, HIV infection was the third leading cause of death among 25 to 44 year-old women in the U.S.

There are currently 240,000 carriers of **Hepatitis C** in Canada. Carriers of the Hepatitis C virus are at risk of developing liver cirrhosis and/or cancer. Treatment with Interferon is effective in about 20 per cent of patients. Ribavirin shows some promise as an antiviral agent against HCV when used in combination with Interferon, but does not appear to be effective when used alone. Studies on combination therapy are under way, but the cost of such treatment will be high.

Traumatic brain injury (TBI) is the number one killer and disabler of young Canadians under the age of 40. Every year 50,000 Canadians sustain brain injuries. Motor vehicle collisions account for over half of all Acquired Brain Injuries (ABI). Long-term consequences of brain injury affect the lives of about 26,000 individuals. Now more than ever, people are surviving brain injuries. Survival rates will increase even further with improvements in neurosurgical and neurological treatments and technologies. Increasing interventions and increasing survival rates will increase the cost of ABI to the system for neurosurgery, long periods in coma or low level state, and extensive periods of therapy.

[37] Wilkes MS, Bell RA, Kravitz RL. "Direct-To-Consumer Prescription Drug Advertising: Trends, Impact, And Implications?" Health Affairs 19(2): 110-28. March/April 2000.

Tuberculosis has continued to thrive in developing countries of the world and, with immigration from these countries, has seen a resurgence in more developed countries since the 1980s.[38,39] Beginning in 1986, the number of reported cases of TB in the U.S., which had been declining at a steady rate of five per cent-six per cent per year, increased for the first time in 33 years. Since then, the number of reported cases has continued to increase nearly every year until 1993.[40] If incidence increases in Canada, TB can be a major new cost to the system.

Diabetes is the leading cause of new blindness, non-traumatic lower limb amputations and end stage renal disease. A person with diabetes incurs two to five times higher medical costs than a person without diabetes. People with diabetes are at risk for developing a variety of complications. Approximately 40 per cent of people with diabetes will develop complications at some point. In Canada, it is estimated that at least $6 billion is spent annually on treating people with diabetes and its complications.

Information Systems and Communications

Hospitals and the health care system are becoming increasingly reliant on information systems and related technologies. In 1999, the total Information Systems and Communications Net Cost for large Canadian hospitals increased by 16.7 per cent from the previous year. In 1999 they spent 2.6 per cent of their total operating costs on information systems. However, Canadian hospitals would appear to still lag behind their U.S. counterparts. A 1996 survey of 129 U.S. hospitals (as reported in *Modern Healthcare*, May 26, 1997) reported information systems costs at a mean of 3.6 per cent, excluding capital expenditures and 5.4 per cent including capital expenditures. Thus, Canadian hospitals might be expected to further increase their expenditures on information systems by as much as 38 per cent. This would require an increase in overall hospital spending of approximately 1.0 per cent per year, or approximately $250 million per year.

There will also be a growing dependence on powerful integrated information systems in hospitals and health regions. An important expansion of these systems will be within community-based services, among community-based providers and between community-based providers and hospitals. Through the effective use of information and communications technology and the appropriate sharing of information, the fragmentation of services among health care and related sectors will be resolved and replaced with a "seamless" continuum of care within and across all services. However, major new investments will be required in information systems to support community providers. The Health Services Restructuring Commission (HSRC) in Ontario estimated that an increased spending of $700 million on information systems would be required (HSRC saw this investment as a bare minimum). Nationally, this could extrapolate to as well over $1 billion.

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[38] Dolin, P.J. et al. "Global Tuberculosis Incidence and Mortality During 1990-2000." *Bulletin of World Health Organization* 72 (1994): 213-220.
[39] Brown, Phyllida. "TB Returns to Haunt America." *New Scientist* 132 (1991): 13.
[40] Ibid

Changing Expectations

The aging of the 'Baby Boom' generation into the age of health service consumption may significantly alter patterns of use of health services. Their expectations are dramatically different from those of their parents and grandparents. Their sense of entitlement to health services will lead to increased demand for, and use of, these services. And, in the more immediate term, it will likely cause them to intervene on behalf of their parents to demand faster access to more services.

These changing expectations are leading to an explosion in the use of home care, increased visits to doctors, additional diagnostic testing, demand for shorter waiting lists, demand for advanced technology and surgical procedures, demand for alternate services (e.g., short-term care, rehab, elder care, palliative care, respite care) and the need for clinicians to stay up to date. Responding to these expectations has, and will continue to drive up the cost of care.

Through the Internet, the new consumers have access to timely research on the newest innovations and advancements in health care and expect these best services for both themselves and for their families. People no longer want the health care system to deliver basic services but now expect to have all of the options, all of the time, wherever they live.

Other Accelerators

To further underscore the need for increased federal support and provincial/territorial flexibility is the fact that higher rates of illness, chronic conditions and premature death occur in certain regions of Canada and in Aboriginal communities.

There are other cost pressures faced by jurisdictions related to population density and geography. For example, in Nunavut, transportation costs alone account for 20 per cent of health and social spending.

Rural and remote service delivery represents an additional cost accelerator. The difficulty of recruitment and retention of service providers, as well as the long distances involved, mean that rural and remote service delivery costs per patient are increasing at a rate faster than the health system in general.

Increasing Unit Costs of Service

Productivity Gains May Be Declining

In the past we have expected and achieved productivity improvements to pay for the increasing volumes of hospital and other health services. However, data suggests that there are fewer opportunities for productivity improvements in health services over the near term. Productivity levels related to increased use of ambulatory surgery, length of stay reduction, increased hours per unit of workload, decrease home-care visits per episode, and reduced overhead costs, may be stabilizing. As a result, we may not be able to continue using system savings to pay for the accelerating rates of use of current, emerging and new health services and technologies in the near term.

During the 1990s, total provincial health expenditures in Canada rose from $42.4 billion to $55.6 billion, an increase of 30.9 per cent. This increase was much smaller than the 148.9 per cent increase in total provincial health expenditures in the previous decade (from 1980 to 1989).

Provincial Health Expenditures – Thousands of Current Dollars

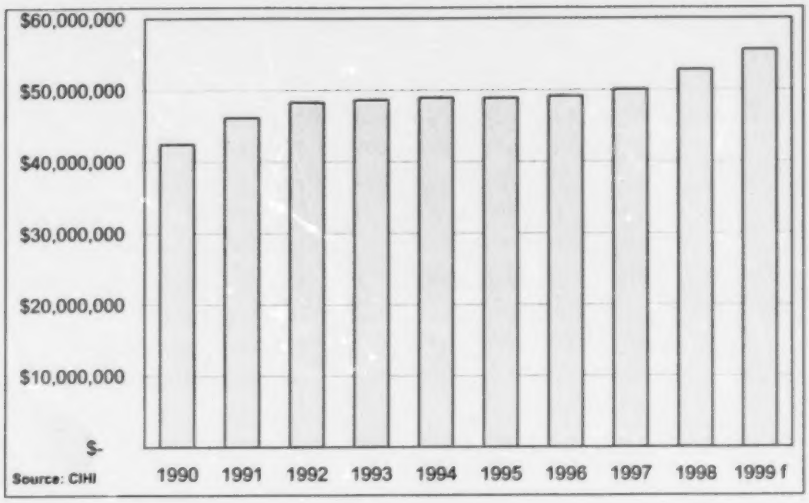

Figure 23

The accompanying chart shows the percent change in provincial health expenditures by sector from 1990 to 1999. Growth in hospital spending was much less than growth in most other health sectors.

Per Cent Change in Provincial Health Expenditure by Sector from 1990 to 1999

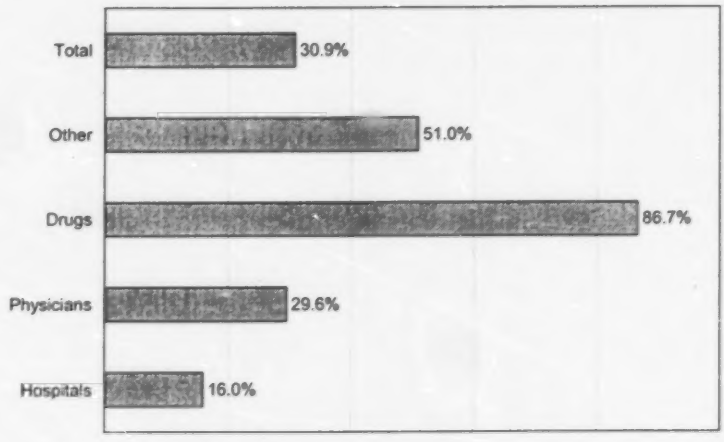

Figure 24

During the 1990s, most provincial and territorial governments introduced regionalization and restructuring of hospital services. The common theme associated with health system changes across the country was reduced reliance on acute care hospitals through increasing capacity and capability in the broader health system. Just as use of hospitals decreased in the U.S. in the 1980s, the early 1990s saw sharp decreases in acute care usage in Canada. At the start of the 1990s, rates of use of acute care beds (as measured in patient days per 1,000 population) in the U.S. were 554 days per 1,000 population lower than in Canada. In 1998/99, the U.S. rate was only 116 days per 1,000 population lower than in Canada.

In both Canada and the United States, the rate of use of acute care hospital days appears to have plateaued at the end of the 1990s. It is highly unlikely that the dramatic reductions in use of inpatient acute care seen in Canada in the early 1990s can be continued in the new millennium. Even in the U.S., where the 1990s were associated with massive investments in home care, rates of use of acute care hospital days are only slightly lower than in Canada. There is no evidence that increased investment in home care in Canada will allow substantial further reduction in acute care requirements.

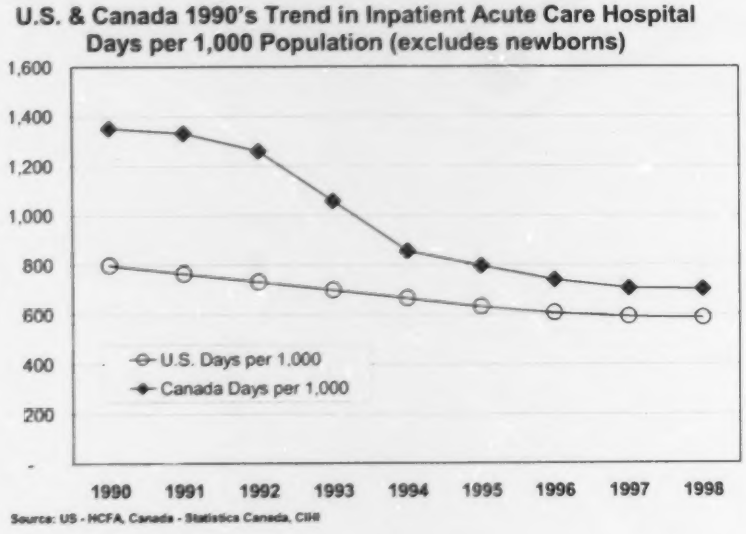

Figure 25

Although there are additional opportunities to reduce costs of services, the most significant cost avoidance opportunities likely were achieved during the early and mid 90s. There are limited opportunities for further cost avoidance in the near term. Although some of the new and emerging technologies and techniques may reduce dependence on hospitals, it is estimated that they will result in more, very high cost interventions. Post-treatment lengths of stay may decrease, but lower cost days of stay at the end of an episode of care will be eliminated. The very high cost initial days of diagnosis and treatment will remain. The net effect will be significantly higher per day costs of treatment.

Accelerating Costs of Labour, Equipment and Capital

One of the key accelerators of labour market costs likely will be shortages of trained staff (particularly nurses, physicians, and technologists). There are signs that shortages may become more severe and protracted in a broad range of health care professions. In addition, the health sector is becoming more international in competition for providers (e.g., Statistics Canada states, "Canada is losing 19 physicians to the U.S. for every one that migrates to Canada. The same trend is true for nurses, with Canada losing about 15 nurses to the U.S. for every one moving North."). Shortages will result from aging of the workforce and resulting retirements, insufficient training places and increased need/demand for services. For example, "*The Future Supply of Registered Nurses in Canada*" reports that Canada's demand for nursing services is expected to rise by as much as 46 per cent. The shortage of health professionals will likely increase their costs and thus increase the unit costs of services well beyond the current cost structure of the health system.

There will also likely be a continued acceleration in the costs of equipment due to introduction of new technologies, increased rate of technological change (and equipment obsolescence and replacement), and broader dissemination of existing technologies.

We are already seeing acceleration in the capital costs associated with the health system due to replacement of Post-War facilities, replacement of inner-suburbs facilities from 60s, new facilities for new suburbs, restructuring/regionalization, and consolidation, and the changing characteristics of long-term care.

Taken together, it is likely that the cost of inputs to the health system will grow at a rate that exceeds the growth in the general CPI.

III. The Cost of System Change and Reform

The preceding analysis identified the underlying base cost drivers of the system (population, aging, inflation) and the "cost accelerators," which are factors that can be expected to increase faster than the base drivers and these include technology, incidence and complexity of disease, and changing expectations. The first set of base drivers indicates approximately a five per cent annual growth pressure. The impact of cost accelerators has not been specifically identified, largely due to the unknown nature of things like emerging technologies and changing expectations, however some illustrative examples have been documented. While we do not know the exact nature of the impact of cost accelerators, it can be safely assumed to be positive and additive to the base drivers.

There is a third major component of the future cost of the health system and that is system change and reform. This speaks to a variety of structural changes including the method of service delivery, the scope of programs and services, effective roles of providers, information systems and new management structures to ensure continuous innovation in Canada's health system. Again, these impacts are difficult to estimate, but again, they can be assumed to be positive (although individual interventions or changes in management structures will improve efficiencies).

As outlined extensively in Section 5 of the Paper, all provinces and territories are implementing health reform in all sectors of the system. These include improvements in: the delivery and management of hospital care, access to physician services and primary care, rapid expansion of home care and other community services, continuity of care and service integration, investments in long-term care and access to new technologies, including acute care and drug therapies.

While the direction of these reforms is consistent, the provision of health care in each jurisdiction must be tailored to meet provincial/territorial demands and priorities. Provinces/territories are best suited to undertake this assessment, given their responsibility for managing and delivering health care.

Much has been written as to the value and need for health care reform. However, the financial cost of widespread health reform is not well documented or studied. One thing has become clear, while initiating reform in some sectors may slow the rate of growth in health spending, there is no evidence to suggest that the reform of Canada's health system will reduce spending, as is often assumed. In areas where much efficiencies have been gained, such as the hospital sector, the benefits of these efficiencies usually remain in the sector to provide other services, (e.g., cancer care, cardiac services, hip and knee replacement and dialyses). As noted earlier, replicating the magnitude of efficiency gains in the 1990s will not be possible in the near term.

The following is a review of the potential cost of program specific reform, or major expansions to address future and unmet demands.

Pharmacare

Currently, pharmacare in Canada does not fall under the Canada Health Act and provinces and territories finance drugs without any federal support. Some provinces/territories cover the entire population with higher levels of deductibles, while others cover a target population (seniors and those on social assistance) with lower levels of deductibles. The federally initiated National Forum proposed a new pharmacare model, similar to how provinces and territories provide hospital and physician services to provide universal and comprehensive drug coverage. In 1997, total prescription drug spending in Canada from all sources was $8.4 billion. That same year, provincial and territorial drug spending (which is by-and-large prescription drugs) amounted to $3.2 billion, or 38.5 per cent of total prescription spending. Therefore to have 100 per cent provincial and territorial prescription drug coverage in 1997 would have required an additional expenditure of $5.2 billion, an increase of over 150 per cent.

Others have estimated the cost of the public sector assuming the cost of drug coverage. A study prepared by Palmer D'Angelo Consulting Inc., in 1997, estimated that a fully funded comprehensive national pharmacare program, as proposed by the National Forum, would increase public expenditures by over $4.3 billion. This figure would now approach between $5 or $6 billion, accounting for growth since that time. Again, these estimates are point estimates and do not account for the future growth in what has traditionally been a high growth sector.

Home Care

All provinces and territories are continuing to invest increasing amounts of resources in home care and other community-based services, both in absolute dollars and in relative amounts, compared to other sectors of the system. While past investments have been significant, a major cost driver over the near and medium term will be the expansion of home care services to meet demand and to provide the community services to support the reforms underway. Emerging telemedicine technologies in the not-so-distant future could also serve to drive up the demand for in-home health services. The expansion of services to meet existing and new demand will require tremendous continued investments.

For example, the Hay Group (Berger Survey) indicates that 10 per cent of the population report that they could use or benefit from home care services. There is evidence that only about three per cent of the population receives home care. This means that national home care spending could potentially rise three-fold to meet this demand. Currently, this demand is being met either by informal caregivers, private insurance, workers' compensation, or private payment. It is unclear how many individuals are foregoing home care that could benefit from the service. The provision of home care has been, and will continue to be, a high growth expenditure for provinces and territories. It is conceivable that provincial home care spending could grow from its current $2.0 billion level to over $6 billion over the next number of years.

Primary Care

All jurisdictions are moving toward the reform of the primary health system to improve access and appropriateness of primary care services. This will allow for both better services for Canadians as well as more appropriate use of secondary and tertiary health services.

Costing analysis of primary care reform is hampered by the lack of rigorous data on current spending on primary care. We do know that General Practitioners represent about one-half of provincial and territorial spending on physician services (approximately $6 billion per year). There are however, many primary care services not provided by physicians. These other services are thought to be not as developed as physician services and are seen as areas that require development and future investments (use of nurses and other health care professionals, health promotion and illness prevention, etc.).

The cost of implementing primary care reform can be assumed to be significant as the changes required to move to 24-hour a day, 7-day-a-week access to services will require new investments. And while there are improvements in the use of health professionals in most primary care models, there will be adjustment costs and add-on expenditures required to implement a team-of-professionals approach.

A key to primary care reform will be the development and implementation of comprehensive and integrated information technology. While this is required system-wide, it is seen as particularly important for primary care. At this stage, the cost implications are not known, however, the magnitude of required investments could be well in excess of $1 billion nationally, based on initial estimates by the Health Services Restructuring Commission's analysis of the potential .. Ontario costs.

Unfortunately, a definitive estimate of primary care reform, at this, stage, is not possible. It can be assumed that there will be efficiencies, better use of health providers, and more appropriate care. However to achieve these service improvements and efficiencies will require significant transition and on-going funding.

The following table summarizes the above costs of cited reforms.

Cost of Selected Reform

Table 6

	Current P/T Expenditure 1997/98 ($Billions)	Incremental Cost ($Billions)	% Increase to Current Program P/T Spending	% Increase to Total Health P/T Spending
Pharmacare Extension	$3.3	$5.2	159.7%	10.3%
Home Care Extension	$2.3	$4.0	65.2%	8.0%
Primary Care	TBD	TBD	TBD	TBD
Other	TBD	TBD	TBD	TBD

The preceding attempts to isolate some significant program-specific reforms and estimate the cost of national implementation. There are several alternative approaches to assessing the potential impact of implementing systemic change and reform in order to provide an appreciation of the potential magnitude of investments.

It must be clear, however, that this estimate is provided to illustrate an order of magnitude and does not advocate a standardized program model. In fact, all provinces and territories agree that each jurisdiction is best suited to determine the type of service required to better meet the unique needs and circumstances of a particular province or territory.

The following table outlines some scenarios to understand the magnitude of resources that may be required to sustain reform. For example, moving from current per capita provincial/territorial spending of $1,819.42 to an average per capita spending of $2,010, which is currently spent in one province, would require an additional incremental investment of $5.8 billion.

As outlined above, another example, would be the cost of moving forward with selected reforms such as pharmacare, home care expansion and primary care, which would require an additional spending of over $10 billion. Finally, moving toward the highest level of per capita spending in each major program area implies an additional expenditure of $19 billion. This approach does accommodate varying utilization rates, program designs and service levels across provinces and territories. It simply illustrates the magnitude of moving to a new national average, which has already been reached in some provinces and territories.

Incremental Costing Scenarios

Table 7

	INCREMENTAL COST ($BILLIONS)	TOTAL P/T ($BILLIONS)	PER CAPITA ($)
Moderate Enhanced Per Capita (increase current P/T per capita from $1,819 to $2,010)	$5.8	$61.4	$2,010.40
Selected Reforms (Pharmacare, Home Care, Primary Care)	$9.2 +	$64.8 +	$2,120.52
Highest Program Per Capita Spending (Moving to the highest Provincial/Territorial per capita spending in each major program area)	$19.2	$74.8	$2,448.61

Again, the preceding table makes no assumptions regarding program design, as individual jurisdictions are best suited to make this determination. It does however capture the impact of the various reforms and service expansions underway in provinces and territories .

The section above attempts to identify the cost implications of health reform, in addition to the costs associated with population, aging and inflation and other cost accelerators. There are some general observations:

- The purpose of health reform is not to reduce spending levels, it is to improve access, quality and cost effectiveness. It may also help moderate future growth.
- Reforms will require significant investments.
- In addition to the cost of reform, there is also significant unmet need in the system that provinces cannot meet on their own.
- Much of the costing above is based either on standardized spending or program design—provinces and territories have and will design and implement reform to reflect jurisdictional needs and priorities.
- Provinces will continue to identify cost efficiencies however it will be extremely difficult to replicate the efficiencies gained in the 1990s in the near term. Cost pressures will continue at a rapid rate.
- Fundamental reform will require more than money—it will require the active participation of health providers and the public

It is essential that implementation of reforms be flexible, allowing for unique needs and program mixes of individual provinces and territories. Without such flexibility, health services in

provinces and territories could be adversely affected. Similarly, dedicated federal funding tied to a particular reform area could limit the ability of provinces and territories to provide the mix of health services most appropriate to their individual needs and circumstances.

By any method, consistently applying reforms and innovations nationally implies a substantial requirement for additional expenditures that provinces, on their own, cannot sustain.

Finally, it is important to recognize that the federal government still has not made a long-term funding commitment to sustaining existing health programs and services, much less health reform. As its first priority, the federal government must renew operating support for the health system through full restoration of the CHST, with an appropriate escalator to ensure future sustainability.

IV. Cost Drivers/Accelerators and Reform Summary

The Base Cost Driver Scenario incorporates basic cost drivers such as population growth, aging, and inflation. By necessity, however, it is based on extrapolation of current rates of utilization of health services to future populations. With the inclusion of an "other" factor of one per cent, to account for unmeasureable changes in health service use or in the bundle of health services available to Canadians, the model predicts an average five per cent per year increase in health care expenditures, with a $13 billion increase in annual expenditures in the next five years.

Recent experience with introduction of new health technologies and changing public expectations suggest that the one per cent factor in the model greatly under-estimates the risk of dramatic acceleration in health expenditures in the near future. Demand and need for health care services will increase due to:

- Increased numbers of the very elderly and greater understanding of opportunities to improve their health status and quality of life through health care interventions
- Increased availability and demand for expensive health care technologies for which research evidence of efficacy exists
- Increasing use of more effective pharmaceuticals
- New or increasingly prevalent diseases
- Changing expectations and awareness of the Internet-connected baby boom generation

At the same time there is evidence that there is rapidly diminishing capacity of the Canadian health care system to absorb this increased demand through improved productivity. Further reduction in hospital utilization is unlikely and the health care inflation rate will likely exceed the general inflation rate.

In addition, the cost of reform will be significant and accelerated reform will be more costly. In order to appreciate the levels of magnitude involved in increasing national average spending to sustain reforms and program change to meet future demands, levels of spending may require between $5 billion and $19 billion in new investments. This speaks to the large amount of resources that could be absorbed in our health system. Along with the significant investments to advance reform, improvements in system management and information will be required to

ensure these investments are cost effective, accountable, and achieve positive outcomes. While money is not *the* answer, it will certainly be a major issue in accelerating reform.

Is there an ultimate absolute amount of money required to modernize Canada's health system? This is a difficult question to answer, as it is dependent on how the system is reformed and how it is managed. One thing is clear, based on past experience and this analysis—it will require significant and permanent new investments.

All of these factors lead to the conclusion that the base prediction of an average annual growth of five per cent in health care expenditures in Canada is highly conservative. It is clear that provinces and territories will have to continue to actively manage the system to address the magnitude of expenditure pressures to meet future demand. The public will also need to make informed choices for appropriate use of the system. It is equally clear that provinces and territories cannot sustain these cost pressures alone—substantive, permanent and growing federal support is essential to the sustainability of our system.

Section 7: Conclusion

This report to Provincial and Territorial Premiers focuses on the pressures facing Canada's health care system now and for the future. It clearly identifies the growing gap between the increasing provincial/territorial funding commitment for medicare and the relative decline of the federal share. The report also illustrates the innovations and renewal activities in every province and territory that have been underway since the late eighties in order to improve quality and access for Canadians and to sustain the system for the future.

Canada's publicly funded health care system is not in crisis. Canadians continue to be well served by their health care system, but it is under serious challenges due to rising demand and cost structures. Every province and territory faces a growing demand for health care services fueled by demographics, new technologies, pharmaceuticals and other growing costs of service provision.

As the report illustrates, the rising need for health services is not sustainable without significant additional federal funding. Recent provincial/territorial health care budgets have risen well in excess of inflation, population growth or the economy. Operating health expenditures for Canada are currently at close to $54 billion. Even with moderate changes in the pattern of service delivery, basic factors (population growth, aging, inflation, rising costs for current programs) are projected to increase health expenditure by approximately five per cent per year. This means that provincial/territorial operating expenditures on health will be $67 billion within five years and almost $85 billion within 10 years.

However, the report also shows that a number of cost accelerators have the potential to raise the growth of costs to well in excess of these numbers. Examples of these accelerators include: emerging and new technologies (such as new pharmaceuticals, major joint surgery, neonatal and fetal technologies, dialysis, organ transplantation, genetic testing and therapy), and increased incidence of chronic and new diseases and treatments such as heart disease, diabetes, and hip and knee replacements.

The growing need for increased and new health services require a renewed funding commitment from the federal government to ensure that the system remains sustainable for now and for the future. For their part, provinces and territories have been engaged in system renewal since the mid 1980s through a wide variety of innovations aimed at improving quality, accessibility, appropriateness, efficiency and effectiveness.

As the report also shows, provinces and territories have responded to the financial pressures by more than back-filling the federal funding cuts and have added even more money to their health budgets. On the other hand, the report indicates the dramatic and long-term reductions of the federal cash contribution both in relative and absolute terms.

Even with recent one-time funding increases in the federal budget, the federal reductions have led to a funding gap well in excess of $4.2 billion. The request of Provincial and Territorial Premiers for full restoration of the federal cuts CHST, together with an appropriate escalator, is therefore an extremely modest and reasonable request. However, this request will permit provinces and territories to improve access to health services and make new treatments, therapies, and medicines available to more Canadians faster.

It is clear that provinces and territories will have to continue to actively manage the system to address the magnitude of expenditure pressures to meet future demand. The public will also need to make informed choices for appropriate use of the system.

It is equally clear that provinces and territories cannot sustain these cost pressures alone. Sustainability requires a federal funding commitment to an immediate, unconditional and full restoration of the Canada Health and Social Transfer. It also requires a federal recognition of the tremendous cost pressures facing the system and, therefore, an appropriate escalator for federal funding through the CHST is essential.

Canadians expect their governments to take the necessary actions and work together to ensure confidence in the publicly funded health care system. Provinces and territories are sending a clear signal that they are willing to work with the federal government to meet this Canadian priority.

Section 8: Appendices

APPENDIX A

Methodology for Base Health Care Spending Scenarios

The base data for the scenarios are per capita operating expenditures for 1999/00. The scenarios have been prepared for each year out to 2026/27.

The methodology consists of extrapolating costs for each program area for each province/ territory separately, and aggregating them to derive the totals for each program, province/ territory and for Canada. The scenarios have been developed for six major program areas:

- Hospitals
- Physicians
- Drugs
- Other Institutions
- Other Professionals
- Other Programs

The multi-year expenditure scenarios presented here are primarily utilization-based models. The underlying assumption is that the current level and mix of services are adequate, and that they are funded at an appropriate level. Therefore, it does not capture any currently unmet demand. They reflect the cost of providing the same real (after inflation) level of services as those funded in 1999-00 to a growing and aging population, as well as accounting for modest growth—one per cent—in other factors.

Specifically, the scenarios extrapolate current spending levels into the future, while taking into account inflation, population growth, population aging, and a factor for other items. This other factor is a modest assumed proxy for a number of variables including technological advances, utilization increases beyond those stemming from population factors, and policy changes.

Data Sources

The base data for the scenarios consist of operating expenditures by age group for each program area for each province/territory.

For three large program areas—hospitals, doctors and drugs—1997 spending by age group for most provinces/territories is available from the 1999 publication of Canadian Institute for Health Information, National Health Expenditure Trends, 1975-1999. For other program areas, 1994 spending by age group and program area at the Canada level, contained in the 1996 publication of the Canadian Institute for Health Information, was used as it was the best available. The re-basing of this data to reflect current spending levels is discussed below.

The first step in the production of the scenarios consists of obtaining forecasts of the various cost drivers of health costs. The population projections used for the scenarios are Statistics Canada's *"Population Projections for Canada—Provinces and Territories."*

The model assumes a constant inflation rate of two per cent out into the future. This assumption was derived after a reviewing the consensus forecast of a number of private sector forecasters. The inflation forecast is for all items.

The model also assumes a constant one per cent per year for other factors.

Per capita expenditure estimates for 1999 for each program area are obtained by taking 1994 or 1997 estimates for each age group, and multiplying by Statistics Canada's 1999 population estimate for the same age group. All age groups are summed to generate an estimate of total spending for the program area. The per capita spending estimate for each age group is adjusted by a constant factor calculated to ensure that the total spending estimate equals CIHI 's 1999 spending estimate for that program area.

Once the per capita expenditures are re-based to 1999, they are multiplied by the CPI inflation forecast and the one per cent other factor to produce per capita spending estimates by age group for each year. These are multiplied by the population estimate for each age group and summed to produce total spending estimates that capture the effects of population growth and aging, in addition to CPI and other factors.

APPENDIX B

Average Annual Growth Rates (over five years) in Operating Expenditures, Canada, Provinces and Territories, 1999/00 to 2026/27 (Per Cent)

	1999/00 to 2004/05	2004/05 to 2009/10	2009/10 to 2014/15	2014/15 to 2019/20	2019/20 to 2024/25	2024/25 to 2026/27	1999/00 to 2026/27
Nfld	3.6	3.9	4.4	4.4	4.3	4.0	4.1
P.E.I.	3.5	4.0	4.5	4.4	4.6	4.4	4.2
N.S.	3.8	4.1	4.4	4.4	4.5	4.3	4.2
N.B.	3.7	4.0	4.2	4.2	4.3	4.1	4.1
Que.	4.4	4.4	4.4	4.3	4.4	4.3	4.4
Ont.	4.9	4.8	4.9	4.8	4.9	4.9	4.9
Man.	3.6	3.8	3.9	4.1	4.3	4.3	4.0
Sask.	3.4	3.4	3.5	3.7	3.9	3.9	3.6
Alta.	5.3	4.9	4.8	4.8	5.0	4.9	4.9
B.C.	5.1	5.2	5.3	5.3	5.3	5.3	5.3
Yukon	3.0	4.1	4.8	4.8	4.6	4.5	4.3
N.W.T.	6.1	6.1	5.9	5.5	5.4	5.3	5.8
Nunavut	7.1	6.9	6.6	6.1	5.9	6.0	6.5
Canada	4.6	4.7	4.7	4.7	4.8	4.8	4.7

Note: Figures shown for 2024/25 to 2026/27 represent average annual growth over two years and figures shown for 1999/00 to 2026/27 represent average annual growth over 27 years.